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Preliminary Report – Till Geochemistry of Part of the West Half of the Coldstream (NTS 21 J/06) Map Area, Carleton and York Counties, New Brunswick

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Preliminary Report – Till Geochemistry of Part of the West Half of the Coldstream (NTS 21 J/06) Map Area, Carleton and York Counties, New Brunswick

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SUMMARY

Samples from 108 sites in the west half of the Coldstream (NTS 21 J/06) map area were collected during a till sampling program carried out in the summers of 1998 and 2000. These samples were obtained primarily from sites along the projected trend of an As-Sb dispersal train previously identified in the adjacent Millville (NTS 21 J/03) map area, and along the trend of the Woodstock fault system. This preliminary report presents the available surficial geology and geochemical data for the sites, so that it may be put to immediate public use.

SOMMAIRE

On a recueilli des échantillons de 108 emplacements dans la moitié occidentale du secteur cartographique de Coldstream (SNRC 21 J/06) dans le cadre d'un programme d'échantillonnage de till au cours des étés 1998 et 2000. On a principalement prélevé ces échantillons le long de la ligne de projection de l'orientation d'une suite de dispersion d'As-Sb précédemment relevée dans le secteur cartographique adjacent de Millville (SNRC 21 J/03) ainsi que le long de l'axe d'orientation du système de failles de Woodstock. Ce rapport préliminaire fait état des données géochimiques et données de géologie de subsurface dont on dispose sur ces emplacements, afin qu'on puisse immédiatement en faire un usage public.

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INTRODUCTION

The Coldstream (NTS 21 J/06) map area lies in west-central New Brunswick, northeast of the town of Woodstock (Figure 1). The western half of the map area is accessible via highways 104 and 107, which pass through the southern part of the area and the northwest corner, respectively. Access is poor in the east-central part of this half of the map area, but most of the rest of the area is readily accessible by interconnecting secondary and local roads.

Till sampling began in the west half of the Coldstream map area during the summer of 1998, and continued during the summer of 2000. One hundred and seventeen samples were collected from 108 sites (Figure 2). These included: 99 samples of basal lodgement till, plus 4 field duplicate samples; six samples of basal deformation till (local till); one sample of basal till of dubious origin (possibly basal meltout till or deformation till); three samples of ablation till; one sample each of colluvium and glaciofluvial sediment; and two samples from bedrock.

The purpose of this preliminary report is to make the data from the 1998 and 2000 sampling program available for public use as expeditiously as possible, with only a brief discussion of the highlights in the data set. Further discussion of this data will appear in the Minerals and Energy Division "Current Research 2000" volume. A final Open File, including digital data files, will be prepared when sampling of the Coldstream map area is completed.

SAMPLING AND ANALYTICAL METHODS

The Sampling Program

Sampling in the west half of the Coldstream map area was conducted using the standard 2 km grid, as has been utilized in similar till sampling programs in the adjacent Millville (NTS 21 J/03) and Woodstock (NTS 21 J/04) map areas (Seaman 1999, 2000). Target grid points are at the intersections of the even numbered UTM easting lines and the odd numbered UTM northing lines on the second edition of the Coldstream (NTS 21 J/06) 1:50 000 scale map sheet (NAD27). Grid points and their associated samples were labelled based on their position in the 2 km grid pattern. Columns were identified by letter from west to east (the letters 'I' and 'J,' were omitted because of potential confusion with the number '1' and the letter 'T,' respectively). Rows were identified by number from north to south. Because of the orientation of the grid on the map sheet, row 1 is absent from the west half of the map area, and row 15 is present only for columns A to H. Therefore, grid point CS-A02 is in the extreme northwestern corner of the study area [UTM easting 616000, northing 5149000, based on North American Datum 1927 (NAD27)], and grid point CS-L14 is in the extreme southeast corner (UTM coordinates 634000E, 5125000N). Where two sites were sampled in the vicinity of a single grid point, the first site was identified with the alphanumeric grid point designation followed by the suffix "a" (e.g., CS-G02a), and the second with the suffix "b". At sites where samples were collected from several levels in a stratigraphic sequence, the upper sample was identified with the suffix "-1", the next lower with the suffix "-2", and so on.

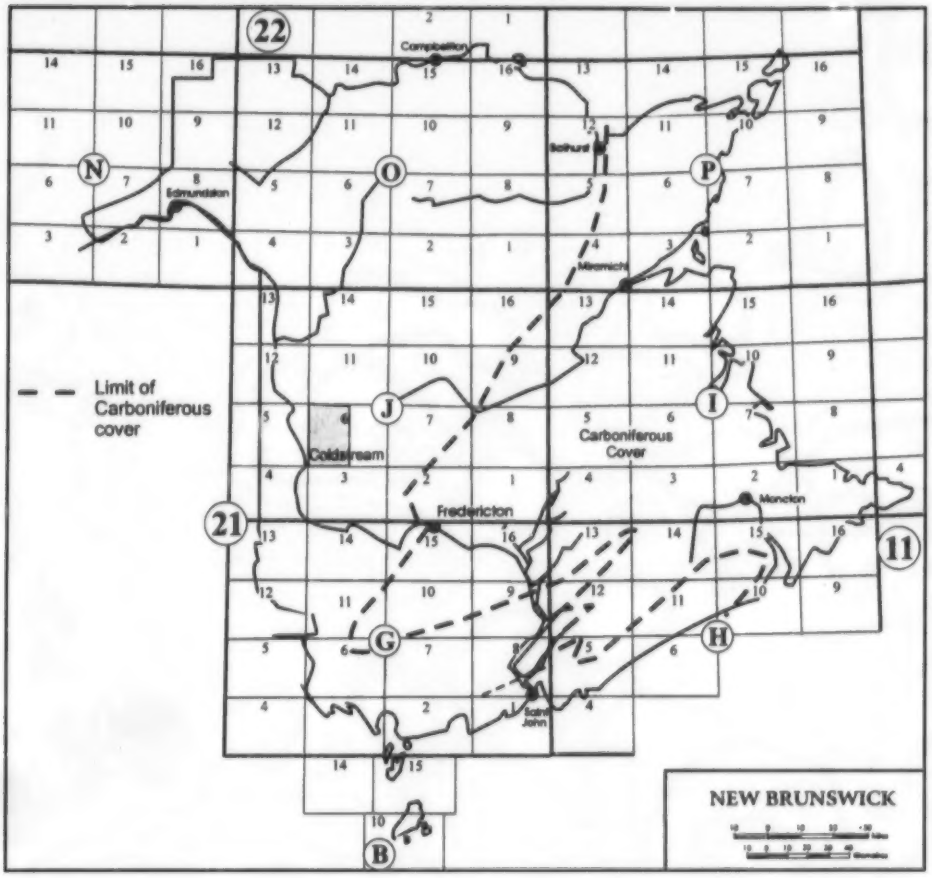

Figure 1. Location of the Coldstream West (NTS 21 J/06W) map area.

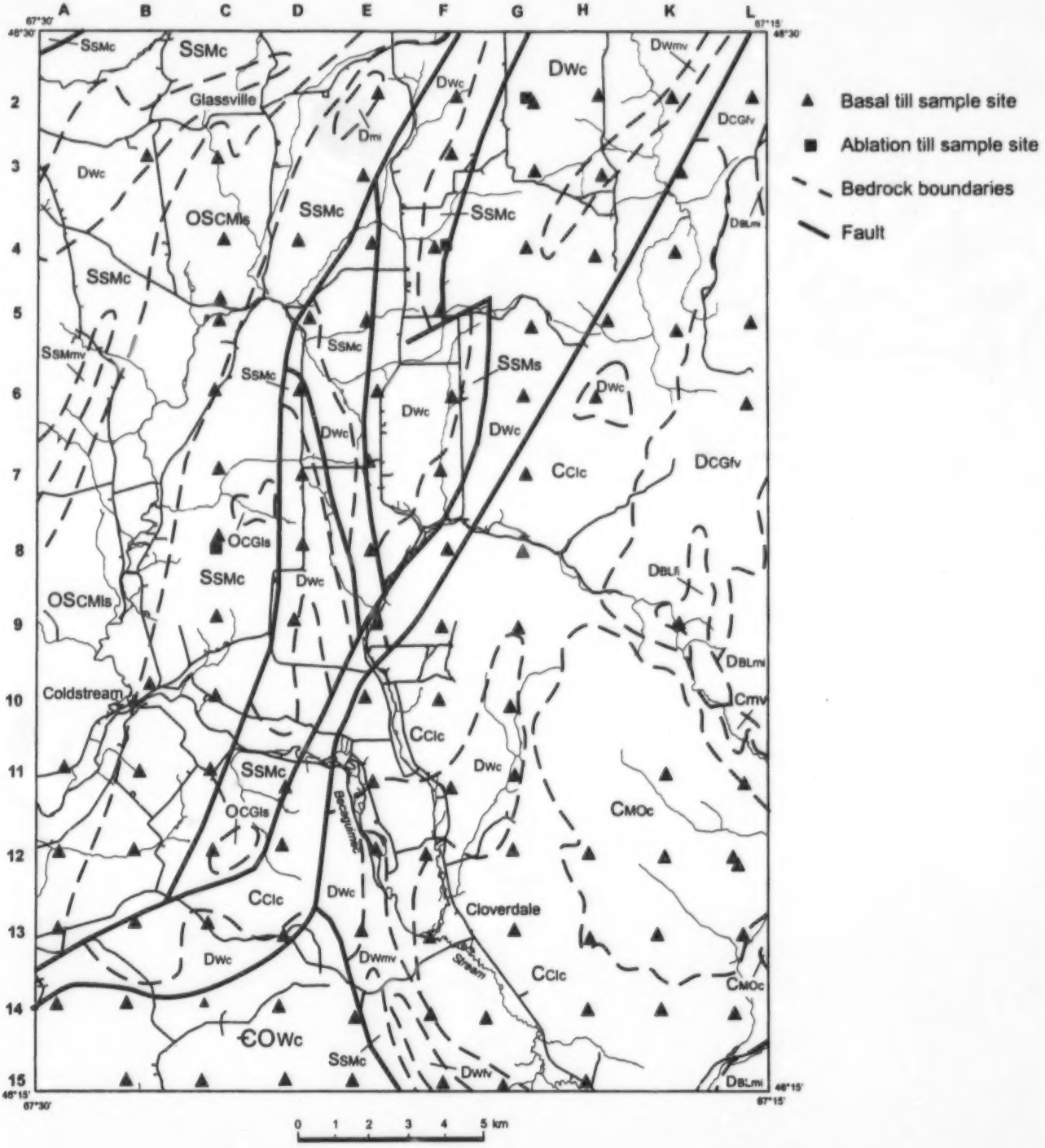

Figure 2. 1998 and 2000 sample site locations in the west half of the Coldstream (NTS 21 J/06) map area, and the bedrock geology of the area. See Table 5 for bedrock unit designations, descriptions and sources.

During the summer of 1998, twenty-three grid points were sampled in the Cloverdale area, in the southeastern part of the study area. These grid points were to the north and northwest of an As-Sb dispersal train previously identified in the north-central part of the adjacent Millville (NTS 21 J/03) map area (Seaman 1998). Sampling continued in 2000, primarily along and adjacent to the north-northwestward projection of the dispersal train, and along and adjacent to the trend of the Woodstock fault system. Till samples were collected from a further 84 sites, representing 79 of the predetermined grid points. The objective of this sampling was: 1) to determine if the elevated As and Sb values continued as a dispersal train from a source associated with the Woodstock fault; and 2) to help evaluate the mineral resource potential along the trend of the Woodstock fault system. In addition, a sample of bedrock was collected from a site near Cloverdale to allow comparison of its geochemistry with that of the till in the dispersal train.

Sampling has not yet been completed either in the area northwest of the Woodstock fault system or in the poorly accessible region in the east-central part of the area. A couple of grid points along the fault system (CS-A15 and -D10) also remain to be sampled.

Field Procedures

Sampling procedure involved the excavation by shovel and rock pick of sample pits, typically extending about 0.25 m into the C-horizon unless bedrock or extreme compaction were encountered as lesser depths. Sample pits were cleaned out and sampled by hand, using a stainless steel hunting knife to loosen the material. Members of the sampling crew refrained from wearing gold jewelry for the duration of the field season so as to prevent contamination of the samples with Au. Approximately 5 kg of material was collected for each C-horizon sample for geochemical and grain size analysis. In addition, a sample of pebbles (nominally 100, if possible) was collected from the C-horizon, for use as an aid in determining till transport direction.

Basal till comprises the target sample medium for the sampling program. This is usually lodgement till, but deformation till or subglacial (basal) meltout till are also acceptable for sampling. Basal till was collected for all sampled grid points in the western half of the Coldstream map area. For each of grid points CS-C05 and CS-L12, two sites were sampled to permit geochemical comparison of basal till with different visual characteristics. At site CS-C05a the material comprised deformation till derived from and exhibiting the same yellowish brown colour as the underlying weathered bedrock. At site CS-05b the basal till was texturally similar to that at site CS-C05a, but with the olive brown colour characteristic of the till found at grid points to the north. At site CS-L12a the till was a brown, muddy sandy gravel, while at site CS-L12b it was a reddish brown, gravelly sandy mud.

In addition to the standard basal till samples, other mediums were sampled at some localities. Ablation till was collected for three of the grid points in the study area (sites CS-C08a, CS-F04a and CS-G02a) for comparison with the basal till at neighbouring sites. Colluvium and glaciofluvial sand was sampled from the stratigraphic section at site CS-K09 for comparison with the underlying basal till. At site CS-C05a the weathered bedrock was sampled for comparison with the overlying till. Sandstone of the Carlisle Formation was sampled from a

roadside outcrop at site CS-GH14, along the trend of the above noted As-Sb dispersal train, for comparison with the till in the dispersal train.

Sample Preparation

Sample preparation was carried out in the Geochemical Laboratory of the Department of Natural Resources and Energy (DNRE) in Fredericton. Part of the material from each sample bag was removed for analysis, and the remainder was archived. The removed part of the sample was oven-dried and sieved, using stainless steel sieves, to separate two subsamples. The first was a silt-plus-clay fraction (<0.063 mm) sample. This was split; part was submitted for geochemical analysis and the remainder was retained for archival purposes. The second subsample, comprising sand and finer material, was used for grain size analysis using a sedimentation technique.

Pebble samples were sectioned with a rock saw, and pebble lithology was determined using a hand lens.

Analytical Procedures

The sample splits for geochemical analysis were submitted to Activation Laboratories Limited (Actlabs) of Ancaster, Ontario. Analyses conducted in 1999 used their "Au+48" package (code 1H), with add on Hg-CV analysis (Code 1G) and analysis of Sn by fusion ICP (code 5D). Analyses conducted in 2001 used the "Au+53" package (Code 1H2), with add-on Hg-CV analysis. The methods of analysis used and the elements determined are summarized below. Detection limits for those elements reported in the data file (Appendix 2) are summarized in Table 1.

(1) *Instrumental Neutron Activation Analysis (INAA)*

INAA analyses were obtained for Au plus 34 elements (Ag, As, Ba, Br, Ca, Ce, Co, Cr, Cs, Eu, Fe, Hf, Hg, Ir, La, Lu, Mo, Na, Nd, Ni, Rb, Sb, Sc, Se, Sm, Sn, Sr, Ta, Tb, Th, U, W, Yb and Zn). Values for Ag, Ca, Hg, Ir, Se, Sn and Sr are not reported in the data file. All samples were below the INAA detection limit for Ag (5 ppm), Hg (1 ppm), Ir (5 ppb), Se (3 ppm), and Sn (0.01%), and most were also below the detection limits for Ca (1%) and Sr (0.05%). Values for these elements, except for Ir, were obtained using other methods, noted below, which have lower detection limits.

(2) *Inductively-coupled Plasma Emission Spectrometry (ICP)*

ICP analyses were obtained for 19 elements (Ag, Al, Be, Ca, Cd, Cu, K, Mg, Mn, Mo, Ni, P, Pb, S, Sr, Ti, V, Y and Zn). Al values may not be total, as Al may not be totally digested in oxidized material. Y values may not be total either, due to its possible occurrence in highly resistant minerals.

(3) *Inductively-coupled Plasma – Mass Spectrometry (ICP-MS)*

ICP-MS analyses were obtained for 7 elements (Bi, Ge, In, Se, Sn, Te and Tl). All samples were below the ICP-MS detection limits for In (0.2 ppm) and therefore these values are not reported in the data file. The values obtained for Sn and Tl may not be total. This procedure was used only for those samples analysed in 2001.

(4) *Fusion ICP Analysis*

Fusion ICP analysis was used to determine Sn values in the samples analysed in 1999.

(5) *Cold Vapour Atomic Absorption Spectrometry (CV-AAS)*

CV-AAS analysis was used to determine Hg.

Actlabs reported the results of their own analytical duplicates for the ICP, ICP-MS and CV-AAS analyses carried out in 2001. Only the average values for these duplicate results are recorded in the data file (Appendix 2).

Reproducibility

Two standard samples were included with the 23 samples submitted to Actlabs in 1999, comprising one split each of Geological Survey of Canada (GSC) standards LKSD-4 and TILL-1. Five standard samples accompanied the samples submitted for analysis in 2001. These comprised two splits each from GSC standards LKSD-4 and TILL-4, and one split from standard TILL-3. The results of the analyses of these standards and the expected values are summarized in Tables 2-1 to 2-3. For standard LKSD-4, the expected value is the mean of the indicated number of other Actlabs analyses of the same standard. For TILL-1, TILL-3 and TILL-4 the expected value is that reported by Lynch (1996). Reproducibility was good for the LKSD-4, TILL-1 and TILL-4 standards, with 78 to 92% of the values returned lying within 2 standard deviations of the expected value. For TILL-3, reproducibility was only fair, with 69% of the values lying within 2 standard deviations of the expected value. The false sample numbers used to identify the standard samples are listed in the tables to indicate the position of these samples in the sequence of analyses.

One blind analytical duplicate was included with the samples submitted to Actlabs in 1999, and four more were included with the samples submitted in 2001. These duplicates comprised duplicate splits obtained from the sample after preparation. In addition, splits of archived material from six of the samples in the 1999 suite were submitted for reanalysis in 2001. The average percent deviation from the mean value was calculated for each element (Table 3), as a measure of the amount of variability between the pairs of duplicate values. It is less than 10% for most elements. The exceptions are primarily elements influenced by the "nugget effect" such as Au and W, those that occur predominantly at levels near the detection limit (e.g., Ag, Ta, etc), and those for which the analytical method is not the optimum for the elemental concentrations generally exhibited by the samples (e.g., Ni and Zn by INAA).

As noted above, the results returned by Actlabs for the ICP, ICP-MS and CV-AAS analyses included their own analytical duplicates. The average percent deviation from the mean was calculated for each of the elements analysed by these methods. These results are also reported in Table 3.

Four field duplicate samples were included among the samples submitted for analysis, one in 1999 and three in 2001. The field duplicate samples for site CS-B10 (CS-B10-1, upper, and CS-B10-2, lower) were collected from levels approximately 1.1 m apart in a large road cut. The field duplicate sample for site CS-D08 (submitted to the lab as CS-A01) was collected from the same test pit as the original sample. The field duplicate samples for sites CS-E11 (submitted as CS-M04) and CS-K05 (submitted as CS-B01) were collected from separate test pits. That for site CS-D08 was about five metres south of the original test pit, while that for site CS-K05 was about 13 m northeast of the original test pit. The average percent deviation from the mean for each element for the field duplicates (Table 3) is generally comparable to, or somewhat greater than, the equivalent values for the analytical duplicates.

As a result of this sampling program, an additional comparison can be made between the grid points of row 15 (columns B to H), which correspond to those of row 1 (same columns) of the Millville (NTS 21 J/03) map area (Seaman 1999). The justification for resampling these grid points for the Coldstream map area was to follow up on the results of the Millville sampling program. Site MV-C01 is a multi-element anomaly (As, Au, Co, Hg, Ni, Pb and Sn); site MV-D01 is threshold anomalous in Au; site MV-E01 is anomalous in W; and site MV-H01 lies in the above noted As-Sb dispersal train and is anomalous in these elements and Sn (Seaman 1998). The actual grid points lie in the Coldstream map area, so the Millville samples for these grid points were collected from sites at or below the northern margin of the NTS 21 J/03 map sheet. The samples for the current project area were collected as close as practicable to the grid points. The ground distance between each pair of sample sites for the same grid point varies from about 200 m to 400 m, except for MV-H01 and CS-H15, which lie approximately 675 m apart on opposite sides of the South Branch Becaguimec Stream valley. The correspondence between the pairs of samples collected for each of these grid points is summarized in Tables 4-1 and 4-2.

SITE AND GEOCHEMICAL DATA

The available site data (location, site characteristics, and field and laboratory data) are presented in Appendix 1. The legend for this appendix is in Table 5. Pebble lithology data is currently available only for those sites lying along the projected trend of the As-Sb dispersal train.

The results of the geochemical analyses are presented in Appendix 2. The corresponding legend is in Table 6.

PRELIMINARY DISCUSSION

Cursory examination of the till geochemical data for the west half of the Coldstream map area reveals several notable geochemical features.

(1) Elevated values for As, Sb, Sn and W occur over much of the area underlain by the Carlisle Formation. Anomalous values for As and Sb are found in the vicinity of Cloverdale. A very high Au anomaly is also present in this area (an average of 43 ppb Au at site CS-H14). In addition, a sample of sandstone from bedrock in the Cloverdale area (site CS-GH14) returned anomalous values for As and Sb. These results suggest that mineralization in the Carlisle Formation could be responsible for the As-Sb dispersal train previously identified in the adjacent Millville map area (Seaman 1998).

(2) Threshold anomalous to anomalous Pb and Zn are evident in a belt that crosses the Howard Brook Fault segment of the Woodstock Fault system (sites CS-K02, -K03, -K04 and -K05). These results could suggest mineralization associated with the fault. However, it is more likely that they represent a dispersal train from the Salmon Brook or Foreston Cu-Pb-Zn occurrences (URNs 0260 and 0874, respectively; see Merlini 1999) in the Wapske Formation to the north-northwest.

(3) Threshold anomalous values for Pb are present in an east-west trending belt centred over the Woodstock Fault system in the southwestern corner of the study area. These suggest possible mineralization associated with the fault system.

(4) Extremely anomalous Au (43 ppb) occurs at site CS-D14. Since no other elements are anomalous at this site, the anomaly could be an analytical perturbation (possibly due to the nugget effect). Follow-up testing will be required to confirm this anomaly.

(5) A multi-element anomaly (including As, Co, Mo, Pb, and Zn) occurs in the lower, more local, till at site CS-A14. In comparison, the element values in the upper till are generally comparable to those at adjacent sites. The anomalies in the lower till may relate to mineralization associated with the nearby Woodstock fault.

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Field assistance during the 1998 field sampling program was provided by Trevor MacLeod, and in 2000 by Vernon Banks, who also cut the pebble samples. Rex Boldon prepared the samples for geochemical analysis and performed the grain size analyses.

The figures for this report were prepared by Terry Leonard. Critical review of this report was provided by Malcolm McLeod.

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Table 1. Summary of analytical detection levels and methods

ELEMENT		DETECTION LEVEL	METHOD
Ag	Silver	0.4 ppm (1999); 0.3 ppm (2001)	ICP
Al	Aluminum	0.01 %	ICP
As	Arsenic	0.5 ppm	INAA
Au	Gold	2 ppb	INAA
Ba	Barium	50 ppm	INAA
Be	Beryllium	2 ppm (1999); 1 ppm (2001)	ICP
Bi	Bismuth	0.1 ppm	ICP-MS
Br	Bromine	0.5 ppm	INAA
Ca	Calcium	0.01 %	ICP
Ce	Cerium	3 ppm	INAA
Co	Cobalt	1 ppm	INAA
Cr	Chromium	5 ppm (1999); 2 ppm (2001)	INAA
Cs	Cesium	1 ppm	INAA
Cu	Copper	1 ppm	ICP
Eu	Europium	0.2 ppm	INAA
Fe	Iron	0.01 %	INAA
Ge	Germanium	0.1 ppm	ICP-MS
Hf	Hafnium	1 ppm	INAA
Hg	Mercury	5 ppb	CV-AAS
K	Potassium	0.01 %	ICP
La	Lanthanum	0.5 ppm	INAA
Lu	Lutetium	0.05 ppm	INAA
Mg	Magnesium	0.01 %	ICP
Mn	Manganese	1 ppm	ICP
Mo	Molybdenum	2 ppm (1999); 1 ppm (2000)	ICP
Mo	Molybdenum	1 ppm	INAA
Na	Sodium	0.01 %	INAA
Nd	Neodymium	5 ppm	INAA
Ni	Nickel	1 ppm	ICP
Ni	Nickel	20 ppm	INAA
P	Phosphorus	0.001 %	ICP
Pb	Lead	4 ppm (1999); 3 ppm (2000)	ICP
Rb	Rubidium	15 ppm	INAA
S	Sulphur	0.01 % (1999); 0.001 % (2001)	ICP
Sb	Antimony	0.1 ppm	INAA
Sc	Scandium	0.1 ppm	INAA
Se	Selenium	0.1 ppm	ICP-MS
Sm	Samarium	0.1 ppm	INAA
Sr	Strontium	1 ppm	ICP
Ta	Tantalum	0.5 ppm	INAA
Tb	Terbium	0.5 ppm	INAA
Te	Tellurium	0.1 ppm	ICP-MS
Th	Thorium	0.2 ppm	INAA
Ti	Titanium	0.01 %	ICP
Tl	Thallium	0.1 ppm	ICP-MS
U	Uranium	0.5 ppm	INAA
V	Vanadium	2 ppm	ICP
W	Tungsten	1 ppm	INAA
Y	Yttrium	2 ppm (1999); 1 ppm (2001)	ICP
Yb	Ytterbium	0.2 ppm	INAA
Zn	Zinc	1 ppm	ICP
Zn	Zinc	50 ppm	INAA

All analyses were by Activation Laboratories Limited, Ancaster, Ontario

Table 2-1. Analyses of standards: LKSD-4

Element †	LKSD-4				
	CS-A2 (2001)	CS-F11 (2001)	CS-L16 (1999)	Expected Value ± 1 σ	No. of Analyses
Ag (ppm) @	<0.3	<0.3	<0.4	<0.4	23
Al (%) @	2.53	2.17	2.94	2.879 ± 0.130	13
As (ppm) #	20.7	18.4	17.2	15.97 ± 2.33	36
Au (ppb) #	<2	<2	5	3.0 ± 3.0	36
Ba (ppm) #	400	280	450	370 ± 93	36
Be (ppm) @	<1	<1	<2	<2	13
Bi (ppm) $	0.5	0.7	n/a	0.339 ± 0.052	3
Br (ppm) #	61.5	63.0	67.3	50.83 ± 6.42	36
Ca (%) @	1.60	1.37	1.27	1.398 ± 0.130	13
Cd (ppm) @	2.3	2.5	1.9	1.87 ± 0.25	23
Ce (ppm) #	54	54	64	51.8 ± 7.8	36
Co (ppm) #	15	14	12	10.6 ± 1.8	36
Cr (ppm) #	27	38	36	35.4 ± 6.1	36
Cs (ppm) #	3	2	2	1.2 ± 0.7	36
Cu (ppm) @	29	26	30	29.3 ± 2.9	23
Eu (ppm) #	1.6	1.4	1.6	1.31 ± 0.21	36
Fe (%) #	3.54	3.45	3.13	2.952 ± 0.363	36
Ge (ppm) $	0.1	0.1	n/a	0.167 ± 0.094	3
Hf (ppm) #	<1	3	3	3.2 ± 0.6	36
Hg (ppb) •	169	156	93	167.6 ± 40.1	29
K (%) @	0.79	0.66	0.61	0.635 ± 0.041	13
La (ppm) #	29.8	28.6	28.4	28.1 ± 3.6	36
Lu (ppm) #	0.42	0.41	0.47	0.410 ± 0.071	36
Mg (%) @	0.63	0.54	0.52	0.535 ± 0.026	13
Mn (ppm) @	497	431	482	443.8 ± 64.7	23
Mo (ppm) @	3	2	2	<2	13
Mo (ppm) #	25	<1	<1	8.7 ± 10.4	32
Na (%) #	0.65	0.62	0.59	0.562 ± 0.079	36
Nd (ppm) #	34	12	45	25.5 ± 5.2	36
Ni (ppm) @	37	33	33	31.5 ± 3.9	23
Ni (ppm) #	<34	43	<29	21 ± 24	36
P (%) @	0.134	0.119	0.159	0.1427 ± 0.0063	13
Pb (ppm) @	90	78	97	89.8 ± 9.9	23
Rb (ppm) #	<15	<15	44	29.3 ± 13.2	36
S (%) @	1.082	0.975	0.85	1.030 ± 0.107	3
Sb (ppm) #	2.1	1.8	2.0	1.75 ± 0.31	36
Sc (ppm) #	7.8	7.8	7.4	6.99 ± 0.86	36
Se (ppm) $	2.1	2.3	n/a	2.20 ± 0.33	3
Sm (ppm) #	5.4	5.6	6.0	4.43 ± 0.64	36
Sn (ppm) $	2	2	n/a	<1	3
Sr (ppm) @	128	107	114	119.2 ± 4.5	13
Ta (ppm) #	<0.5	<0.5	<0.5	<0.5	36
Tb (ppm) #	0.5	<0.5	<0.5	0.57 ± 0.38	36
Te (ppm) $	0.2	0.2	n/a	0.53 ± 0.09	3
Th (ppm) #	5.6	5.1	5.4	5.65 ± 0.87	36
Ti (%) @	0.20	0.17	0.16	0.162 ± 0.008	13
Tl (ppm) $	0.6	0.6	n/a	0.360 ± 0.059	3
U (ppm) #	30.9	33.4	34.1	33.1 ± 5.6	36
V (ppm) @	46	41	48	44.2 ± 4.0	13
W (ppm) #	<1	<1	<1	<1	36
Y (ppm) @	26	23	24	23.2 ± 2.3	13
Yb (ppm) #	2.8	2.6	2.5	2.46 ± 0.35	36
Zn (ppm) @	205	166	182	173.7 ± 19.4	23
Zn (ppm) #	228	271	208	208.0 ± 38.4	36

† Symbols indicate the analytical method (see Table 6)

Table 2-2. Analyses of standards: TILL-1 and TILL-3

Element †	TILL-1			TILL-3		
	CS-E16 (1999)	Expected value ± 1 σ	n ‡	CS-Q10 (2001)	Expected value ± 1 σ	n ‡
Ag (ppm) @	0.4	0.2 ± 0.1	28	1.5	1.6 ± 0.2	47
Al (%) @	6.85	7.3 ± 0.1	40	3.55	6.5 ± 0.1	41
As (ppm) #	22.5	18 ± 1	58	91.5	87 ± 4	49
Au (ppb) #	7	13 ± 4	65	<2	6 ± 4	65
Ba (ppm) #	750	702 ± 59	121	320	489 ± 36	1.1
Be (ppm) @	<2	2.4 ± 0.6	26	1	2.0 ± 0.5	27
Bi (ppm) $	n/a	<5	25	0.3	<5	25
Br (ppm) #	7.0	6.4 ± 0.6	44	5.0	4.5 ± 0.5	40
Ca (%) @	1.77	1.94 ± 0.07	56	2.16	1.88 ± 0.07	57
Cd (ppm) @	<0.5	<0.2	24	<0.3	<0.2	24
Ce (ppm) #	89	71 ± 6	75	38	42 ± 5	74
Co (ppm) #	18	18 ± 2	95	14	15 ± 2	96
Cr (ppm) #	67	65 ± 6	58	114	123 ± 14	56
Cs (ppm) #	2	1.0 ± 0.2	36	2	1.7 ± 0.4	41
Cu (ppm) @	42	47 ± 4	48	20	22 ± 5	49
Eu (ppm) #	2.1	1.3 ± 0.5	50	1.0	<1.0	35
Fe (%) #	5.35	4.81 ± 0.22	98	2.97	2.78 ± 0.12	88
Ge (ppm) $	n/a	n/a		0.2	n/a	
Hf (ppm) #	15	13 ± 1	62	5	8 ± 2	58
Hg (ppb) *	87	92 ± 11	31	106	107 ± 15	33
K (%) @	1.61	1.84 ± 0.08	59	1.93	2.01 ± 0.08	56
La (ppm) #	30.2	28 ± 2	100	19.4	21 ± 2	96
Lu (ppm) #	0.70	0.6 ± 0.1	39	0.26	0.2 ± 0.1	30
Mg (%) @	1.14	1.30 ± 0.04	46	0.84	1.03 ± 0.03	43
Mn (ppm) @	1332	1420 ± 75	46	511	520 ± 39	45
Mo (ppm) @	<2	2 ± 1	53	<1	2 ± 1	38
Mo (ppm) #	<1	2 ± 1	53	<1	2 ± 1	38
Na (%) #	2.13	2.01 ± 0.07	54	1.97	1.96 ± 0.08	54
Nd (ppm) #	38	26 ± 2	14	16	16 ± 1	13
Ni (ppm) @	23	24 ± 4	57	46	39 ± 7	52
Ni (ppm) #	<33	24 ± 4	57	50	39 ± 7	52
P (%) @	0.094	0.0930 ± 0.0060	60	0.044	0.0490 ± 0.0040	62
Pb (ppm) @	19	22 ± 3	46	27	26 ± 3	49
Rb (ppm) #	49	44 ± 6	86	66	55 ± 7	87
S (%) @	0.03	<0.05	14	0.016	<0.05	14
Sb (ppm) #	7.6	7.8 ± 0.5	48	0.8	0.9 ± 0.1	41
Sc (ppm) #	16.6	13 ± 2	64	10.5	10 ± 1	55
Se (ppm) $	n/a	n/a		0.3	n/a	
Sm (ppm) #	7.0	5.9 ± 0.4	45	3.5	3.3 ± 0.3	42
Sn (ppm) $	n/a	n/a		<1	n/a	
Sr (ppm) @	277	291 ± 10	61	296	300 ± 12	61
Ta (ppm) #	<0.5	0.7 ± 0.1	47	<0.5	<0.5	41
Tb (ppm) #	0.8	1.1 ± 0.2	48	<0.5	<0.5	42
Te (ppm) $	n/a	n/a		<0.1	n/a	
Th (ppm) #	6.8	5.6 ± 0.5	58	4.7	4.6 ± 0.4	55
Ti (%) @	0.45	0.5990 ± 0.0210	54	0.30	0.2910 ± 0.0090	52
Tl (ppm) $	n/a	n/a		0.3	n/a	
U (ppm) #	1.5	2.2 ± 0.3	53	1.9	2.1 ± 0.2	49
V (ppm) @	96	99 ± 10	72	63	62 ± 6	69
W (ppm) #	<1	<1	48	<1	<1	42
Y (ppm) @	29	38 ± 4	34	10	17 ± 3	36
Yb (ppm) #	4.5	3.9 ± 0.4	52	1.8	1.5 ± 0.2	20
Zn (ppm) @	81	98 ± 10	69	58	56 ± 6	68
Zn (ppm) #	115	98 ± 10	69	<50	56 ± 6	68

† Symbols indicate the analytical method (see Table 6)
‡ Number of determinations, excluding outliers.

Table 2-3. Analyses of standards: TILL-4

Element †	TILL-4			
	CS-D3 (2001)	CS-K10 (2001)	Expected value ± 1 σ	n ‡
Ag (ppm) @	0.4	0.4	<0.2	28
Al (%) @	4.35	4.98	7.6 ± 0.1	41
As (ppm) #	118	114	111 ± 6	59
Au (ppb) #	7	<2	5 ± 3	77
Ba (ppm) #	380	300	395 ± 37	132
Be (ppm) @	3	3	3.7 ± 0.5	27
Bi (ppm) $	48.5	46.7	40 ± 3	23
Br (ppm) #	9.0	8.6	8.6 ± 0.9	51
Ca (%) @	0.88	0.95	0.89 ± 0.04	59
Cd (ppm) @	0.3	<0.3	<0.2	24
Ce (ppm) #	74	73	78 ± 7	81
Co (ppm) #	8	7	8 ± 2	94
Cr (ppm) #	39	52	53 ± 10	66
Cs (ppm) #	11	13	12 ± 1	59
Cu (ppm) @	230	229	237 ± 17	53
Eu (ppm) #	1.4	1.3	<1.0	56
Fe (%) #	4.11	4.11	3.97 ± 0.19	105
Ge (ppm) $	0.2	0.1	n/a	
Hf (ppm) #	10	9	10 ± 1	69
Hg (ppb) *	33	28	39 ± 12	34
K (%) @	2.91	2.84	2.70 ± 0.10	57
La (ppm) #	44.9	44.1	41 ± 4	108
Lu (ppm) #	0.56	0.56	0.5 ± 0.2	48
Mg (%) @	0.72	0.71	0.76 ± 0.02	44
Mn (ppm) @	445	450	490 ± 30	45
Mo (ppm) @	14	12	16 ± 2	77
Mo (ppm) #	12	11	16 ± 2	77
Na (%) #	1.86	1.81	1.82 ± 0.08	53
Nd (ppm) #	31	28	30 ± 2	14
Ni (ppm) @	17	18	17 ± 3	57
Ni (ppm) #	<20	<30	17 ± 3	57
P (%) @	0.083	0.080	0.0880 ± 0.0050	60
Pb (ppm) @	62	57	50 ± 4	48
Rb (ppm) #	140	129	161 ± 15	86
S (%) @	0.074	0.072	0.08 ± 0.01	13
Sb (ppm) #	1.3	1.3	1.0 ± 0.1	48
Sc (ppm) #	11.1	11.1	10 ± 1	69
Se (ppm) $	0.5	0.8	n/a	
Sm (ppm) #	6.5	6.3	6.1 ± 0.4	48
Sn (ppm) $	7	6	n/a	
Sr (ppm) @	86	100	109 ± 11	64
Ta (ppm) #	<0.5	1.4	1.6 ± 0.2	52
Tb (ppm) #	1.2	0.9	1.1 ± 0.2	53
Te (ppm) $	0.3	0.3	n/a	
Th (ppm) #	16.5	16.0	17.4 ± 1.4	60
Ti (%) @	0.51	0.50	0.4840 ± 0.0130	51
Tl (ppm) $	1.3	1.1	n/a	
U (ppm) #	3.7	3.4	5.0 ± 0.5	65
V (ppm) @	66	65	67 ± 7	70
W (ppm) #	180	180	204 ± 24	81
Y (ppm) @	11	15	33 ± 3	35
Yb (ppm) #	3.8	3.8	3.4 ± 0.5	55
Zn (ppm) @	71	66	70 ± 7	67
Zn (ppm) #	62	62	70 ± 7	67

† Symbols indicate the analytical method (see Table 6)
‡ Number of determinations, excluding outliers.

Table 3. Replication of duplicate samples

ELEMENT	Average % deviation from the mean *			ELEMENT	Average % deviation from the mean*		
	Anal. Dupl.	Anal. Dupl. †	Field Dupl.		Anal. Dupl.	Anal. Dupl. †	Field Dupl.
Ag (ICP)	24.1	4.1	8.3	Na (INAA)	2.7		3.7
Al (ICP)	10.9	11.5	17.0	Nd (INAA)	17.8		12.6
As (INAA)	2.8		4.2	Ni (ICP)	2.8	1.6	1.2
Au (INAA)	20.5		49.4	Ni (INAA)	37.1		5.1
Ba (INAA)	8.9		12.0	P (ICP)	5.5	4.5	4.5
Be (ICP)	0.0	14.3	8.3	Pb (ICP)	18.9	6.9	4.7
Bi (ICP-MS)	8.3	17.9	6.7	Rb (INAA)	9.8		5.1
Br (INAA)	19.3		42.0	S (ICP)	13.3	5.7	18.9
Ca (ICP)	10.2	5.3	9.1	Sb (INAA)	5.9		8.6
Cd (ICP)	19.1	0.0	0.0	Sc (INAA)	3.0		4.1
Ce (INAA)	6.7		6.3	Se (ICP-MS)	43.2	21.3	40.2
Co (INAA)	3.3		2.8	Sm (INAA)	1.4		7.2
Cr (INAA)	3.1		4.0	Sn (ICP-MS)	0.0	5.6	11.1
Cs (INAA)	5.0		7.7	Sr (ICP)	5.8	4.2	5.8
Cu (ICP)	5.7	1.5	3.9	Ta (INAA)	20.2		32.5
Eu (INAA)	6.5		6.7	Tb (INAA)	27.1		39.5
Fe (INAA)	1.7		3.5	Te (ICP-MS)	8.3	0.0	0.0
Ge (ICP-MS)	12.3	14.4	7.0	Th (INAA)	3.2		2.6
Hf (INAA)	5.7		14.6	Ti (ICP)	7.2	5.7	9.9
Hg (CV-AAS)	5.5	5.4	10.2	Tl (ICP-MS)	2.8	1.3	0.0
K (ICP)	6.2	3.5	5.0	U (INAA)	9.3		9.9
La (INAA)	4.3		5.1	V (ICP)	5.1	3.3	4.3
Lu (INAA)	4.2		6.8	W (INAA)	22.8		0.0
Mg (ICP)	6.9	6.2	5.5	Y (ICP)	15.3	14.3	17.5
Mn (ICP)	4.7	2.1	6.7	Yb (INAA)	4.1		5.1
Mo (ICP)	24.2	31.4	5.0	Zn (ICP)	4.7	0.9	7.6
Mo (INAA)	13.8		50.8	Zn (INAA)	15.6		10.5

* the average of the percent deviation from the mean value of the pair of analyses for each sample (e.g., if duplicate analyses return values of 1 and 3 for an element, there is a 50% deviation from the mean value of 2; if duplicate values are identical, there is 0% deviation from the mean)

† for analytical duplicates prepared by Activation Laboratories Limited

Table 4-1. Comparison between Millville and Coldstream sample results for the same grid points, columns B to E

Element †	1 S.D. ‡	MV-B01	CS-B15	MV-C01	CS-15	MV-D01	CS-D15	MV-E01	CS-E15
Ag (ppm) @	0.3	**<0.4**	**<0.3**	**<0.4**	**<0.3**	**<0.4**	**<0.3**	**<0.4**	**<0.4**
Al (%) @	0.92	**6.84**	**6.10**	*7.20*	*9.24*	*7.37*	*4.86*	**6.59**	**7.42**
As (ppm) #	8.1	**16**	**13.2**	26	12.2	15	26.0	**13**	**14.4**
Au (ppb) #	2	**3**	**<2**	*7*	*<2*	*7*	*<2*	**<2**	**<2**
Ba (ppm) #	86	390	480	**470**	**400**	**430**	**470**	*380*	*630*
Be (ppm) @	1	**<2**	**2**	**<2**	**2**	**<2**	**2**	**<2**	**2**
Br (ppm) #	7.8	**<0.5**	**2.8**	16	<0.5	*2.5*	*28.5*	**3.9**	**3.0**
Ca (%) @	0.21	**0.24**	**0.33**	*0.18*	*0.83*	**0.37**	**0.22**	**0.13**	**0.21**
Cd (ppm) @	<0.1	**<0.5**	**<0.3**	**<0.5**	**<0.3**	**<0.5**	<0.3	**<0.5**	**<0.5**
Ce (ppm) #	22	**69**	**78**	**98**	**77**	73	110	**83**	**94**
Co (ppm) #	4	**13**	**16**	**20**	**17**	*14*	*41*	**15**	**16**
Cr (ppm) #	20	**100**	**110**	**130**	**130**	120	150	**110**	**127**
Cs (ppm) #	3	**3**	**4**	**4**	**5**	*4*	*11*	**5**	**6**
Cu (ppm) @	10	**29**	**25**	31	19	**31**	**27**	**26**	**30**
Eu (ppm) #	0.3	1.4	1.9	**1.9**	**1.9**	**1.6**	**1.8**	*1.6*	*2.3*
Fe (%) #	0.78	**3.97**	**4.29**	**4.57**	**4.27**	*4.23*	*6.00*	**3.72**	**4.45**
Hf (ppm) #	3	**8**	**8**	**10**	**10**	**9**	**9**	14	9
Hg (ppb) *	28	**35**	**36**	79	33	45	96	**46**	**42**
K (%) @	0.32	1.82	2.15	1.83	2.46	**2.06**	**2.10**	1.63	1.99
La (ppm) #	8.9	**37**	**41.9**	**38**	**43.2**	43	30.3	**46**	**42.0**
Lu (ppm) #	0.13	**0.52**	**0.55**	**0.54**	**0.59**	**0.61**	**0.67**	**0.62**	**0.62**
Mg (%) @	0.22	1.17	1.47	1.25	1.58	**1.12**	**1.09**	**0.93**	**0.94**
Mn (ppm) @	344	**832**	**816**	*1644*	*493*	*980*	*7797*	**907**	**796**
Mo (ppm) @	<1	**<2**	**<1**	**<2**	**<1**	**<2**	**<1**	**<2**	**<2**
Mo (ppm) #	1	**<1**	**1**	*5*	*<1*	**3**	**3**	**<1**	**<1**
Na (%) #	0.25	**1.37**	**1.37**	**1.28**	**1.37**	*1.30*	*0.79*	**1.30**	**1.10**
Nd (ppm) #	9	**25**	**33**	**29**	**33**	**28**	**24**	**37**	**45**
Ni (ppm) @	14	**61**	**65**	**78**	**65**	**64**	**73**	**56**	**60**
P (%) @	0.022	**0.050**	**0.036**	**0.080**	**0.062**	*0.052*	*0.183*	**0.042**	**0.050**
Pb (ppm) @	8	*15*	*32*	**23**	**27**	*13*	*44*	**10**	**12**
Rb (ppm) #	24	**110**	**91**	**110**	**120**	*92*	*150*	**76**	**93**
Sb (ppm) #	0.7	**1.4**	**0.9**	**1.4**	**0.9**	**1.2**	**1.4**	**1.1**	**1.5**
Sc (ppm) #	2.7	**15**	**17.3**	**15**	**16.6**	*16*	*22.5*	14	18.5
Sm (ppm) #	1.6	**5.5**	**7.1**	**7.0**	**7.5**	**6.6**	**6.9**	**6.5**	**7.8**
Sn (ppm) @,$	1	**<1**	**1**	**2**	**1**	**1**	**2**	**1**	**<1**
Sr (ppm) @	20	**75**	**82**	*59*	*119*	84	44	**69**	**69**
Ta (ppm) #	0.7	1.3	<0.5	**1.1**	**1.8**	**1.7**	**1.1**	1.9	<0.5
Tb (ppm) #	0.4	**0.9**	**0.9**	**1.0**	**0.9**	**1.0**	**1.1**	**1.0**	**1.2**
Th (ppm) #	4.7	**8.6**	**9.5**	**9.2**	**9.6**	**9.6**	**13.0**	**11**	**10.7**
Ti (%) @	0.07	*0.42*	*0.64*	*0.41*	*0.65*	0.44	0.55	**0.46**	**0.42**
U (ppm) #	1.8	**2.0**	**2.2**	**1.9**	**2.2**	1.9	4.7	**2.8**	**2.5**
V (ppm) @	17	**104**	**107**	**109**	**104**	107	137	**90**	**106**
W (ppm) #	1	**<1**	**<1**	**<1**	**<1**	<1	2	*3*	*<1*
Y (ppm) @	8	**24**	34	*26*	*47*	34	19	**24**	**30**
Yb (ppm) #	1.0	**3.4**	**3.7**	**3.9**	**3.9**	**4.3**	**4.5**	**3.6**	**4.0**
Zn (ppm) @	17	**68**	**83**	**69**	**76**	*73*	*126*	**53**	**65**

† Symbols indicate the analytical method (see Table 6)

‡ Standard deviation obtained for 1145 basal till samples from west-central New Brunswick, exclusive of the Coldstream area, and calculated after extreme high values were deleted.

Bold Values for the two sites within one standard deviation of one another.

Italic Values for the two sites greater that two standard deviations apart.

Table 4-2. Comparison between Millville and Coldstream sample results for the same grid points, columns F to H

Element †	1 S.D. ‡	MV-F01	CS-F15	CS-F15 dupl.	MV-G01	MV-G01 dupl.	CS-G15	MV-H01	MV-H01 dupl.	CS-H15	CS-H15 dupl.
Ag (ppm) @	0.3	**<0.4**	**0.5**	**0.6**	**0.5**	**<0.4**	**0.4**	**0.5**	**<0.4**	**0.4**	**0.3**
Al (%) @	0.92	**6.84**	**6.23**	**5.93**	**6.83**	6.59	**7.70**	6.66	6.63	7.77	5.70
As (ppm) #	8.1	**14**	**12.9**	**13.5**	**21**	**19**	**15.2**	**40**	43	**32.7**	**32.5**
Au (ppb) #	2	**<2**	**<2**	**<2**	**<2**	5	**<2**	**<2**	**<2**	**<2**	**<2**
Ba (ppm) #	86	**400**	300	**330**	**530**	**450**	**520**	**420**	**290**	**440**	**340**
Be (ppm) @	1	**<2**	**<2**	**<2**	**2**	**<2**	**2**	**2**	**<2**	**2**	**2**
Br (ppm) #	7.8	**<0.5**	10.6	9.5	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
Ca (%) @	0.21	0.43	0.14	0.15	**0.16**	**0.13**	**0.31**	**0.08**	**0.06**	**0.19**	**0.23**
Cd (ppm) @	<0.1	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.3**
Ce (ppm) #	22	**76**	**82**	**78**	**81**	**78**	**88**	65	74	*122*	104
Co (ppm) #	4	**14**	**13**	**14**	**13**	**12**	**16**	**14**	**14**	**15**	**16**
Cr (ppm) #	20	**120**	**108**	**114**	100	94	125	**100**	**110**	**102**	**101**
Cs (ppm) #	3	**7**	**5**	**4**	**12**	**11**	**10**	**16**	**18**	**16**	**15**
Cu (ppm) @	10	**24**	**20**	**22**	**26**	**25**	**29**	**29**	**28**	**23**	**19**
Eu (ppm) #	0.3	1.7	1.3	1.2	**2.3**	**2.0**	**2.1**	*1.1*	*1.0*	*2.2*	*1.9*
Fe (%) #	0.78	**3.64**	**3.51**	**3.70**	**4.12**	3.54	**4.61**	**4.04**	**3.84**	**4.32**	**4.30**
Hf (ppm) #	3	**11**	**10**	**9**	**9**	**8**	**9**	**11**	**11**	**14**	**12**
Hg (ppb) *	28	**27**	**44**	**46**	**30**	**29**	**48**	**27**	**26**	**12**	**15**
K (%) @	0.32	*2.01*	*1.18*	*1.18*	**1.84**	**1.78**	**1.95**	1.98	2.01	2.47	*2.66*
La (ppm) #	8.9	**43**	33.9	**38.1**	**46**	**46**	**48.7**	35	39	*58.0*	52.4
Lu (ppm) #	0.13	0.64	0.39	*0.37*	**0.56**	**0.62**	**0.59**	*0.40*	0.55	*0.84*	0.76
Mg (%) @	0.22	1.26	0.86	0.87	**0.96**	**0.92**	**1.10**	1.01	**1.05**	**1.27**	1.30
Mn (ppm) @	344	**411**	**622**	**649**	**777**	**713**	**847**	**826**	**774**	**903**	**783**
Mo (ppm) @	<1	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**<1**
Mo (ppm) #	1	**<1**	**<1**	**<1**	*<1*	*<1*	*4*	**<1**	**<1**	2	**<1**
Na (%) #	0.25	**1.23**	**1.12**	**1.08**	**1.09**	**1.04**	**1.14**	**0.64**	**0.67**	**0.66**	**0.73**
Nd (ppm) #	9	**27**	**33**	**28**	**47**	*35*	**56**	**30**	22	*57*	**33**
Ni (ppm) @	14	**57**	**47**	**50**	**57**	**51**	**57**	**48**	**45**	**46**	**45**
P (%) @	0.022	0.072	0.044	0.045	**0.042**	**0.046**	**0.062**	**0.033**	**0.037**	**0.049**	**0.043**
Pb (ppm) @	8	**8**	**12**	**14**	**14**	**14**	**14**	9	**17**	**22**	*35*
Rb (ppm) #	24	*120*	*65*	*53*	**90**	**96**	**83**	**110**	**130**	**130**	**116**
Sb (ppm) #	0.7	**1.1**	**0.9**	**0.9**	**1.5**	**1.4**	**1.3**	**2.8**	3.5	**2.3**	**2.1**
Sc (ppm) #	2.7	15	11.5	11.1	14	13	17.9	**13**	**14**	**15.8**	**15.3**
Sm (ppm) #	1.6	**6.5**	**4.9**	4.7	**7.3**	**7.7**	**7.6**	*4.1*	*4.6*	*8.6*	*9.1*
Sn (ppm) $	1	**<1**	**<1**	**1**	**2**	**1**	**<1**	**3**	**1**	**2**	**2**
Sr (ppm) @	20	**78**	**65**	**67**	**70**	**63**	**76**	**60**	**56**	**63**	**59**
Ta (ppm) #	0.7	**<0.5**	**<0.5**	1.3	<0.5	<0.5	1.2	**<0.5**	**1.5**	**0.9**	**1.6**
Tb (ppm) #	0.4	**1.0**	<0.5	**0.9**	<0.5	**1.2**	**1.0**	**1.0**	<0.5	**1.3**	**1.1**
Th (ppm) #	4.7	**11**	**9.7**	**8.7**	**12**	**9.7**	**11.1**	**13**	**12**	**15.2**	**14.8**
Ti (%) @	0.07	**0.43**	**0.44**	**0.47**	**0.41**	**0.42**	**0.41**	**0.50**	**0.51**	**0.49**	**0.58**
U (ppm) #	1.8	**1.7**	**2.3**	**2.2**	4.4	**1.7**	**2.3**	**2.8**	**2.1**	**3.4**	**3.1**
V (ppm) @	17	**94**	**87**	**89**	**94**	**91**	**106**	**96**	**95**	**103**	**90**
W (ppm) #	1	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	*<1*	*<1*	*6*	*4*
Y (ppm) @	8	*31*	*13*	*13*	**34**	40	**31**	*16*	20	*40*	36
Yb (ppm) #	1.0	4.3	2.6	2.6	**4.2**	**4.5**	**4.0**	3.2	**4.1**	5.6	**5.1**
Zn (ppm) @	17	**70**	**58**	**63**	**65**	**57**	**71**	**70**	**64**	**69**	**68**

† Symbols indicate the analytical method (see Table 6)

‡ Standard deviation obtained for 1145 basal till samples from west-central New Brunswick, exclusive of the Coldstream area, and calculated after extreme high values were deleted.

Bold Values for the two sites within one standard deviation of one another.

Italic Values for the two sites greater that two standard deviations apart.

Table 5. Legend for the site data file (Appendix 1)

RECORD	TEXT CODE	DEFINITION
Sample ID	CS	Coldstream map area (NTS 21 J/6)
	-A	Westernmost grid line (UTM easting ^{6}16000)
	-L	Easternmost grid line (UTM easting ^{6}34000)
	02	Northernmost grid line (UTM northing ^{51}49000)
	15	Southernmost grid line (UTM northing ^{51}23000)
Replicate Status	0	Routine sample site
	1	First of a site duplicate pair
	2	Second of a site duplicate pair
Sampled By		- initials of senior person at the site
	AAS	Allen Seaman
Date Sampled	xxxx/xx/xx	Year/Month/Day
Mapsheet	21 J/06	Coldstream National Topographic System map area
UTM Easting	xxxxxx	NAD 27 – 1998 sample sites: measured to the nearest 25 m, from the location plotted on the map; - 2000 sample sites: measured by GPS and rounded to the nearest 10 m
UTM Northing	xxxxxxx	NAD 27 – 1998 sample sites: measured to the nearest 25 m, from the location plotted on the map; - 2000 sample sites: measured by GPS and rounded to the nearest 10 m
Elevation	xxx	m - estimated from the contour lines on the NTS topographic map
Material	aT	Ablation till
	bT	Basal lodgement till
	dT	Basal deformation till
	Cv	Colluvial veneer
	GF	Glaciofluvial sediment
Compactness	vL	Very loose
	L	Loose
	mL	Moderately loose
	mC	Moderately compact
	C	Compact
	vC	Very Compact
	eC	Extremely compact
Drainage	R	Rapidly drained
	W	Well drained
	M	Moderately well drained
	I	Imperfectly drained
	P	Poorly drained
Depth to Base	xx	cm - depth from the top of the mineral soil to the base of the excavated section, or to the base of the sampled unit in a multi-unit section
Bedrock at Base	N	Bedrock not encountered in section
	Y	Bedrock at the base of the section
Stone Coverage	x/y	x – stones 25 to 100 cm in size y – stones >100 cm in size
	1	<1 %
	2	1-3 %
	3	4-15 %
	4	16-50%

RECORD	TEXT CODE	DEFINITION
Colour		Munsell soil colour
Gravel	%	Visual estimate of total percent volume of pebble, cobble and boulder size material in the sampled unit
Sand	%	Percentage of sand-size material (0.05-2 mm) in the sub-gravel fraction of the sample
Silt	%	Percentage of silt-size material (0.0035-0.05 mm) in the sub-gravel fraction of the sample
Clay	%	Percentage of clay-size material (<0.0035 mm) in the sub-gravel fraction of the sample
Texture 1 *	C	Clay (>39% clay, <40% silt, <45% sand)
	CL	Clay Loam (27 to 40% clay, 20 to 45% sand)
	SCL	Sandy Clay Loam (20 to 35% clay, <28% silt, >44% sand)
	ZL	Silt Loam (12 to 27% clay, >49% silt; or, <12% clay, 50 to 80% silt)
	L	Loam (7 to 27% clay, 28 to 50% silt, <52% sand)
	SL	Sandy Loam (<21% clay, % silt + 2x % clay >30, >51% sand; or. <7% clay, <50% silt, 43 to 52% sand)
	LS	Loamy Sand (70 to 90% sand, silt + 2x clay <31, silt + 1.5x clay >14)
	S	Sand (>84% sand, silt + 1.5x clay <15)
	g	Gravelly (prefix, indicating 20 to 50% gravel)
	vg	Very gravelly (prefix, indicating 50 to 90% gravel)
Texture 2 †	sM	Sandy Mud (<31% gravel, <50% sand in the sub-gravel fraction, clay/silt ratio 2:1 to 1:2)
	sZ	Sandy Silt (<31% gravel, <50% sand in the sub-gravel fraction, clay/silt ratio <1:2)
	mS	Muddy Sand (<31% gravel, >49% sand in the sub-gravel fraction, clay/silt ratio 2:1 to 1:2)
	zS	Silty Sand (<31% gravel, >49% sand in the sub-gravel fraction, clay/silt ratio <1:2)
	S	Sand (<31% gravel, >89% sand in the sub-gravel fraction)
	smG	Sandy Muddy Gravel (>30% gravel, 10 to 49% sand in the sub-gravel fraction, clay/silt ratio 2:1 to 1:2)
	szG	Sandy Silty Gravel (>30% gravel, 10 to 49% sand in the sub-gravel fraction, clay/silt ratio <1:2)
	csG	Clayey Sandy Gravel (>30% gravel, >49% sand in the sub-gravel fraction, clay/silt ratio >2:1)
	msG	Muddy Sandy Gravel (>30% gravel, >49% sand in the sub-gravel fraction, clay/silt ratio 2:1 to 1:2)
	zsG	Silty Sandy Gravel (>30% gravel, >49% sand in the sub-gravel fraction, clay/silt ratio <1:2)
	sG	Sandy Gravel (>30% gravel, >89% sand in the sub-gravel fraction)
	G	Gravel (>80% gravel)
	g	Gravelly (prefix, indicating 6 to 30% gravel)
	(g)	Slightly gravelly (prefix, indicating 1 to 5% gravel)
Clastic Seds.	%	Percentage of pebbles derived from clastic sedimentary and metasedimentary rocks (not including those that gave a visible reaction to 10% HCl)
Calc. Rocks	%	Percentage of calcareous clastic sedimentary pebbles (those which reacted to 10% HCl)

RECORD	TEXT CODE	DEFINITION
Granitic	%	Percentage of pebbles derived from felsic intrusive rocks (granite to granodiorite)
Gabbroic	%	Percentage of pebbles derived from mafic intrusive rocks (gabbro to diorite)
Mafic Volc.	%	Percentage of pebbles derived from mafic volcanic rocks
M-F Volc.	%	Percentage of pebbles derived from intermediate or indeterminate (mostly tuffaceous) volcanic rocks
Felsic Volc.	%	Percentage of pebbles derived from felsic volcanic rocks; includes chert
Quartz	%	Percentage of pebbles composed primarily of vein quartz
n		Total number of pebbles in the sample
va-sa	%	Percentage of very angular to subangular clasts (clasts most probably derived from local bedrock units)
Underlying Rock Unit #	**Carboniferous**	
	CMOc	*Mountain View Formation:* grey quartzose sandstone and quartz-pebble conglomerate
	CCIc	*Carlisle Formation:* red polymictic pebble-cobble conglomerate, red lithic sandstone; minor red mudstone locally containing limestone nodules; minor red breccia and grey arkose
	Cmv	*unnamed unit:* dark grey, amygdaloidal mafic volcanic rocks
	Devonian	
	DBLfi	*Becaguimec Lake Granite:* grey to pink, fine- to medium-grained, micrographic, biotite and hornblende-biotite granite and granodiorite; minor reddish brown quartz-feldspar porphyry and red granophyre
	DBLmi	*Becaguimec Lake Gabbro:* green to grey, medium-grained, diabase to ophitic gabbro; minor pinkish grey monzodiorite
	Dmi	*unnamed unit:* dark grey, fine-grained, diabasic gabbro; minor quartz-diorite
	DWfv	*Wapske Formation:* greyish green to pink felsic flows, tuff and breccia; minor quartz-feldspar porphyry
	DWmv	*Wapske Formation:* dark green, amygdaloidal mafic volcanic rocks; minor sedimentary rocks
	DWc	*Wapske Formation:* dark grey slate and siltstone interbedded with grey sandstone and grey pebble-cobble polymictic conglomerate
	DCGc	*Costigan Mountain Formation:* dark grey siltstone interbedded with grey quartzose sandstone, and minor polymictic conglomerate
	DCGfv	*Costigan Mountain Formation:* pink trachytic feldspar porphyry, pink trachytic quartz-feldspar porphyry, pink lapilli rhyolite tuff; minor pink eutaxitic rhyolite tuff
	Silurian	
	SSMmv	*Smyrna Mills Formation:* dark green, amygdaloidal, mafic volcanic rocks
	SSMc	*Smyrna Mills Formation:* grey slate, green and grey siltstone and calcareous sandstone; minor red slate, grey graptolitic siltstone, green quartzose sandstone, orange-weathering, calcareous quartzose siltstone, grey lithic wacke and conglomerate, light grey limestone, and felsic volcanic rocks

RECORD	TEXT CODE	DEFINITION
		Ordovician-Silurian
	OSCMls	*Carys Mills Formation:* thinly interbedded light grey-weathering limestone and dark calcareous slate
		Ordovician
	OCGls	*Craig Brook Formation:* interbedded grey to dark grey carbonaceous crystalline limestone, grey lithographic limestone, dark grey to black chert, and dark grey calcareous slate; minor quartzose sandstone, dolomite and light green sericitic tuff
		Cambrian-Ordovician
	COWc	*Woodstock Group (formerly Miramichi Group):* olive-green to grey quartzose wacke interbedded with grey-green and maroon slate

* Texture following Canada Department of Agriculture (1974)

† Texture modified after Folk (1968)

\# Underlying rock unit designations are preliminary, since updated 1:50 000 scale bedrock geology compilation has not been completed for the Coldstream map area. Unit boundaries were derived from Fyffe (1982); however, unit designations have been updated to 2000 standards (L.R. Fyffe, 2000, personal communication). Unit descriptions are based on St. Peter (1982), Venugopal (1982) and Fyffe (1984).

Table 6. Legend for the geochemical data file (Appendix 2)

CODE	DEFINITION
Rep Stat	Replicate status
0	Routine sample site
1	First of a site duplicate pair
2	Second of a site duplicate pair
8	Laboratory (blind) duplicate
Material	Sampled material: codes as for Appendix 1 (see Table 4)
#	Instrumental neutron activation analysis (INAA)
@	Inductively-coupled plasma emission spectrometry (ICP)
$	Inductively-coupled plasma – mass spectrometry (ICP-MS)
*	Cold vapour atomic absorption spectrometry (CV-AAS)

Appendix 1.

Site Location, Site Characteristics and Geological Data

Coldstream (NTS 21 J/06)

Appendix 1. Site Location, Site Characteristics and Geological Data, Coldstream (NTS 21 J/06W)

Sample ID	Replicate Status	Sampled By	Date Sampled	Mapsheet	UTM Easting (NAD27)	UTM Northing (NAD27)	Elevation (m)
CS-A11	0	AAS	2000/08/30	21 J/06	616000	5131050	125
CS-A12	0	AAS	2000/08/30	21 J/06	616060	5128970	107
CS-A13-1	0	AAS	2000/06/29	21 J/06	616100	5126920	105
CS-A13-2	0	AAS	2000/06/29	21 J/06	616100	5126920	105
CS-A14-1	0	AAS	2000/06/27	21 J/06	616030	5124830	108
CS-A14-2	0	AAS	2000/06/27	21 J/06	616030	5124830	108
CS-B03	0	AAS	2000/08/08	21 J/06	617990	5147070	290
CS-B10-1	0	AAS	2000/08/31	21 J/06	618320	5133160	105
CS-B10-2	0	AAS	2000/08/31	21 J/06	618320	5133160	105
CS-B11	0	AAS	2000/08/30	21 J/06	618010	5130960	185
CS-B12	0	AAS	2000/08/29	21 J/06	618040	5129000	140
CS-B13	0	AAS	2000/07/24	21 J/06	617970	5127060	142
CS-B14	0	AAS	2000/06/27	21 J/06	617990	5125020	146
CS-B15	0	AAS	2000/08/22	21 J/06	618010	5123030	194
CS-C03	0	AAS	2000/08/08	21 J/06	619760	5147180	200
CS-C04	0	AAS	2000/07/27	21 J/06	620000	5144930	211
CS-C05a	0	AAS	2000/08/04	21 J/06	620010	5142920	162
CS-C05b	0	AAS	2000/08/04	21 J/06	619960	5143360	163
CS-C06	0	AAS	2000/08/04	21 J/06	619850	5140970	219
CS-C07	0	AAS	2000/08/31	21 J/06	619990	5138990	180
CS-C08a	0	AAS	2000/07/26	21 J/06	619990	5136960	181
CS-C08b	0	AAS	2000/07/26	21 J/06	620020	5137170	188
CS-C09	0	AAS	2000/08/29	21 J/06	619970	5135010	197
CS-C10	0	AAS	2000/08/01	21 J/06	620060	5133070	133
CS-C11	0	AAS	2000/06/20	21 J/06	620000	5131060	177
CS-C12	0	AAS	2000/06/21	21 J/06	620000	5129000	175
CS-C13	0	AAS	2000/07/24	21 J/06	620010	5127110	200
CS-C14	0	AAS	2000/08/22	21 J/06	619940	5125020	186
CS-C15	0	AAS	2000/08/29	21 J/06	619970	5123010	186
CS-D04	0	AAS	2000/07/27	21 J/06	621960	5144980	215
CS-D05	0	AAS	2000/06/15	21 J/06	622320	5143090	194
CS-D06	0	AAS	2000/06/08	21 J/06	622140	5140990	235
CS-D07	0	AAS	2000/06/08	21 J/06	622230	5138890	215
CS-D08	1	AAS	2000/06/08	21 J/06	622300	5137040	223
CS-D08	2	AAS	2000/06/08	21 J/06	622300	5137040	223
CS-D09	0	AAS	2000/08/01	21 J/06	622010	5134990	206
CS-D11	0	AAS	2000/06/20	21 J/06	621990	5130790	151
CS-D12	0	AAS	2000/06/21	21 J/06	621890	5129130	181
CS-D13	0	AAS	2000/06/20	21 J/06	622000	5126890	232
CS-D14	0	AAS	2000/06/19	21 J/06	621890	5125040	255
CS-D15	0	AAS	2000/06/19	21 J/06	622080	5123110	211
CS-E02	0	AAS	2000/08/09	21 J/06	624000	5148720	399
CS-E03	0	AAS	2000/07/21	21 J/06	623940	5146880	309
CS-E04	0	AAS	2000/08/18	21 J/06	624020	5144980	257
CS-E05	0	AAS	2000/06/14	21 J/06	623900	5142970	200
CS-E06	0	AAS	2000/06/06	21 J/06	624250	5141100	229
CS-E07	0	AAS	2000/06/06	21 J/06	623890	5139200	219
CS-E08	0	AAS	2000/06/12	21 J/06	624050	5136860	260
CS-E09	0	AAS	2000/06/13	21 J/06	624250	5134940	163
CS-E10	0	AAS	2000/06/13	21 J/06	624030	5133030	180
CS-E11	1	AAS	1998/06/29	21 J/06	624150	5130900	103

Appendix 1. Site Location, Site Characteristics and Geological Data, Coldstream (NTS 21 J/06W)

Sample ID	Replicate Status	Sampled By	Date Sampled	Mapsheet	UTM Easting (NAD27)	UTM Northing (NAD27)	Elevation (m)
CS-E11	2	AAS	1998/06/29	21 J/06	624150	5130900	103
CS-E12	0	AAS	1998/07/13	21 J/06	624250	5129050	105
CS-E13	0	AAS	1998/06/25	21 J/06	624000	5127000	178
CS-E14	0	AAS	1998/06/24	21 J/06	624000	5124875	170
CS-E15	0	AAS	1998/06/24	21 J/06	623950	5123100	222
CS-F02	0	AAS	2000/06/23	21 J/06	626190	5148880	330
CS-F03	0	AAS	2000/06/23	21 J/06	626040	5147430	313
CS-F04a	0	AAS	2000/08/18	21 J/06	626010	5145000	275
CS-F04b	0	AAS	2000/08/18	21 J/06	625800	5145000	249
CS-F05	0	AAS	2000/06/06	21 J/06	625830	5143170	255
CS-F06	0	AAS	2000/07/31	21 J/06	626200	5140990	215
CS-F07	0	AAS	2000/07/13	21 J/06	625850	5139000	190
CS-F08	0	AAS	2000/07/13	21 J/06	625980	5136970	220
CS-F09	0	AAS	2000/06/05	21 J/06	626000	5135020	170
CS-F10	0	AAS	2000/06/05	21 J/06	625970	5133030	190
CS-F11	0	AAS	1998/07/09	21 J/06	626200	5130725	119
CS-F12	0	AAS	1998/07/13	21 J/06	625725	5129000	112
CS-F13	0	AAS	1998/07/07	21 J/06	625975	5126800	106
CS-F14	0	AAS	1998/07/07	21 J/06	626000	5125000	150
CS-F15	0	AAS	1998/07/03	21 J/06	626275	5122975	180
CS-G02a	0	AAS	2000/06/15	21 J/06	628040	5149010	400
CS-G02b	0	AAS	2000/06/15	21 J/06	628220	5148910	410
CS-G03	0	AAS	2000/06/23	21 J/06	628220	5146950	427
CS-G04	0	AAS	2000/07/21	21 J/06	628030	5145010	412
CS-G05	0	AAS	2000/07/06	21 J/06	628160	5142840	460
CS-G06	0	AAS	2000/07/31	21 J/06	627780	5141050	328
CS-G07	0	AAS	2000/07/25	21 J/06	628030	5139020	330
CS-G08	0	AAS	2000/07/25	21 J/06	627980	5136950	280
CS-G09	0	AAS	2000/08/01	21 J/06	628010	5135020	230
CS-G10	0	AAS	2000/06/05	21 J/06	627920	5132850	207
CS-G11	0	AAS	1998/08/04	21 J/06	627975	5131000	170
CS-G12	0	AAS	1998/06/25	21 J/06	628000	5129050	140
CS-G13	0	AAS	1998/08/04	21 J/06	628000	5127000	121
CS-G14	0	AAS	1998/07/02	21 J/06	627450	5124825	111
CS-G15	0	AAS	1998/07/02	21 J/06	628000	5123025	135
CS-GH14	0	AAS	2000/06/12	21 J/06	629200	5125900	116
CS-H02	0	AAS	2000/06/09	21 J/06	629990	5149090	346
CS-H03	0	AAS	2000/06/01	21 J/06	630080	5146940	411
CS-H04	0	AAS	2000/06/26	21 J/06	630000	5144970	407
CS-H05	0	AAS	2000/06/26	21 J/06	630200	5143160	383
CS-H06	0	AAS	2000/07/06	21 J/06	629990	5141030	391
CS-H12	0	AAS	1998/06/29	21 J/06	630000	5129000	323
CS-H13	0	AAS	1998/07/27	21 J/06	630150	5126850	155
CS-H14	0	AAS	1998/07/27	21 J/06	630150	5125050	126
CS-H15	0	AAS	1998/07/09	21 J/06	630200	5123100	111
CS-K02	0	AAS	2000/06/09	21 J/06	631900	5149010	331
CS-K03	0	AAS	2000/07/20	21 J/06	632010	5147090	340
CS-K04	0	AAS	2000/07/20	21 J/06	632010	5144990	340
CS-K05	1	AAS	2000/07/19	21 J/06	632050	5142910	374
CS-K05	2	AAS	2000/07/19	21 J/06	632060	5142920	374
CS-K09-1	0	AAS	2000/08/03	21 J/06	632160	5135140	212

Appendix 1. Site Location, Site Characteristics and Geological Data, Coldstream (NTS 21 J/06W)

Sample ID	Replicate Status	Sampled By	Date Sampled	Mapsheet	UTM Easting (NAD27)	UTM Northing (NAD27)	Elevation (m)
CS-K09-2	0	AAS	2000/08/03	21 J/06	632160	5135140	212
CS-K09-3	0	AAS	2000/08/03	21 J/06	632160	5135140	212
CS-K11	0	AAS	2000/07/05	21 J/06	632100	5131130	349
CS-K12	0	AAS	2000/07/05	21 J/06	632030	5129050	352
CS-K13	0	AAS	1998/07/08	21 J/06	631950	5126950	265
CS-K14	0	AAS	1998/07/06	21 J/06	631975	5125025	151
CS-L02	0	AAS	2000/07/14	21 J/06	633970	5149000	442
CS-L05	0	AAS	2000/07/20	21 J/06	634000	5143120	381
CS-L06	0	AAS	2000/09/01	21 J/06	633830	5140900	423
CS-L11	0	AAS	2000/08/10	21 J/06	634140	5131010	330
CS-L12a	0	AAS	2000/07/05	21 J/06	633920	5129000	343
CS-L12b	0	AAS	2000/07/05	21 J/06	633900	5129130	341
CS-L13	0	AAS	1998/07/09	21 J/06	634000	5127025	240
CS-L14	0	AAS	1998/07/06	21 J/06	634000	5125050	170

Appendix 1. Site Location, Site Characteristics and Geological Data, Coldstream (NTS 21 J/06W)

Sample ID	Replicate Status	Material	Compactness	Drainage	Depth to Base (cm)	Bedrock at Base	Stone Coverage	Colour	Grvl. % est.	Sand %	Silt %	Clay %	Texture 1	Texture 2
CS-A11	0	bT	vC	M	66	N	1/1	2.5 Y 5/4	10	31	32	37	CL	gsM
CS-A12	0	bT	C	M	88	N	1/1	2.5 Y 4/4	30	32	30	38	gCL	gsM
CS-A13-1	0	bT	mC	M	59	N	1/1	2.5 Y 5/4	5	39	42	19	L	(g)sZ
CS-A13-2	0	dT	mC	M	100	Y	-	10 YR 4/6	<5	36	45	19	L	(g)sZ
CS-A14-1	0	bT	C	R	80	N	1/1	2.5 Y 5/4	70	42	34	24	vgL	smG
CS-A14-2	0	bT	C	R	118	N	-	10 YR 5/4	70	60	15	25	vgSCL	msG
CS-B03	0	bT	vC	W	78	N	1/1	2.5 Y 5/4	70	46	32	22	vgL	smG
CS-B10-1	0	bT	C	P	90	N	1/1	2.5 Y 4/2	20	30	27	43	gC	gsM
CS-B10-2	0	bT	C	P	200	N	-	2.5 Y 4/3	30	34	26	40	gC	gsM
CS-B11	0	bT	C	W	60	Y	2/1	2.5 Y 5/4	70	47	39	14	vgL	szG
CS-B12	0	bT	C	P	71	N	1/1	2.5 Y 4/2	30	60	19	21	gSCL	gmS
CS-B13	0	bT	C/vC	W	73	N	1/1	10 YR 4/4	60	50	30	20	vgL	msG
CS-B14	0	bT	C	I	60	N	1/1	2.5 Y 5/4	30	42	30	28	gCL	gsM
CS-B15	0	bT	vC	M	59	N	2/1	2.5 Y 5/3	30	37	30	33	gCL	gsM
CS-C03	0	bT	mC/C	W	78	N	1/1	2.5 Y 5/6	20	37	38	25	gL	gsM
CS-C04	0	bT	C/vC	M	72	N	1/1	2.5 Y 5/3	30	44	33	23	gL	gsM
CS-C05a	0	dT	mC	M	54	Y	1/1	10 YR 4/6	5	29	46	25	L	(g)sM
CS-C05b	0	bT	C	M	83	N	1/1	2.5 Y 4/4	10	32	42	26	L	gsM
CS-C06	0	bT	C	M	62	N	1/1	10 YR 5/4	30	41	32	27	gCL	gsM
CS-C07	0	bT	mC/C	W	86	N	1/1	2.5 Y 5/4	50	56	32	12	gSL	zsG
CS-C08a	0	aT	L	R	87	N	1/1	10 YR 3/6	70	80	14	6	vgLS	zsG
CS-C08b	0	bT	C	W	60	N	1/1	2.5 Y 5/4	40	49	32	19	gL	smG
CS-C09	0	bT	C	W	70	Y	1/1	10 YR 5/3	70	36	36	28	vgCL	smG
CS-C10	0	bT	C	W	84	N	1/1	2.5 Y 5/4	60	46	33	21	vgL	smG
CS-C11	0	bT	C	W	71	Y	1/1	2.5 Y 5/4	30	44	30	26	gL	gsM
CS-C12	0	bT	vC	I	57	N	1/1	2.5 Y 5/4	30	46	35	19	gL	gsM
CS-C13	0	bT	C	W	62	Y	1/1	10 YR 4/4	70	55	27	18	vgSL	msG
CS-C14	0	bT	vC	M	71	N	1/1	10 YR 4/3	70	44	31	25	vgL	smG
CS-C15	0	bT	C	M	63	N	1/1	2.5 Y 5/3	10	32	41	27	CL	gsM
CS-D04	0	bT	C	W	103	N	1/1	2.5 Y 4/4	70	50	32	18	vgL	msG
CS-D05	0	bT	mC	R	75	N	1/1	10 YR 4/4	40	59	31	10	gSL	zsG
CS-D06	0	bT	C	P	50	N	1/1	2.5 Y 4/3	20	41	29	30	gCL	gsM
CS-D07	0	dT	C	R	64	Y	1/1	10 YR 5/6	80	34	44	22	vgL	smG
CS-D08	1	bT	C	M	77	N	1/1	2.5 Y 5/4	30	38	33	29	gCL	gsM
CS-D08	2	bT	C	M	77	N	1/1	2.5 Y 5/4	30	37	34	29	gCL	gsM
CS-D09	0	bT	C/vC	M	57	N	1/1	2.5 Y 5/4	30	40	33	27	gCL	gsM
CS-D11	0	bT	C	W	79	N	1/1	2.5 Y 4/4	30	45	30	25	gL	gsM
CS-D12	0	bT	C	M	65	N	1/1	10 YR 4/4	5	36	30	34	CL	(g)sM
CS-D13	0	bT	mC/vC	W	72	N	1/1	10 YR 5/3	30	62	19	19	gSL	gmS
CS-D14	0	bT	C	M	65	Y	1/1	10 YR 4/4	<5	30	30	40	C	(g)sM
CS-D15	0	bT	C	R	60	N	1/1	2.5 Y 5/4	50	89	3	8	gLS	csG
CS-E02	0	bT	C	R	100	N	1/1	2.5 Y 4/6	70	56	38	6	vgSL	zsG
CS-E03	0	bT	mC/C	W	69	N	1/1	2.5 Y 5/4	50	46	42	12	gL	szG
CS-E04	0	bT	eC	W	67	N	1/1	2.5 Y 6/4	70	39	36	25	vgL	smG
CS-E05	0	bT	C	W	70	N	1/1	10 YR 3/6	80	48	29	23	vgL	smG
CS-E06	0	dT	C	M	81	Y	1/1	2.5 Y 4/4	80	58	26	16	vgSL	msG
CS-E07	0	bT	mC/vC	M	78	N	1/1	2.5 Y 4/4	50	68	17	15	gSL	msG
CS-E08	0	bT	mC	W	80	Y?	1/1	10 YR 4/4	70	40	46	14	vgL	szG
CS-E09	0	bT	mC	R	69	Y	1/1	10 YR 4/4	70	68	20	12	vgSL	msG
CS-E10	0	bT	C	I	64	N	1/1	7.5 YR 4/4	30	44	34	22	gL	gsM
CS-E11	1	bT	C	M	80	N	1/1	10 YR 4/3	10	24	43	33	CL	gsM

Appendix 1. Site Location, Site Characteristics and Geological Data, Coldstream (NTS 21 J/06W)

Sample ID	Replicate Status	Material	Compactness	Drainage	Depth to Base (cm)	Bedrock at Base	Stone Coverage	Colour	Grvl. % est.	Sand %	Silt %	Clay %	Texture 1	Texture 2
CS-E11	2	bT	C	M	80	N	1/1	10 YR 4/3	10	30	40	30	CL	gsM
CS-E12	0	bT	C/vC	M	101	Y	1/1	7.5 YR 4/3	30	27	30	43	gC	gsM
CS-E13	0	bT	vC	M	69	N	1/1	10 YR 4/4	40	33	29	38	gCL	smG
CS-E14	0	dT	mL	M	73	N	1/1	10 YR 5/4	60	49	33	18	vgL	smG
CS-E15	0	bT	C	P	67	N	1/1	10 YR 5/4	40	32	30	38	gCL	smG
CS-F02	0	bT	C	I	71	N	1/1	2.5 Y 5/4	30	23	43	34	gCL	gsM
CS-F03	0	bT	vC	W	82	N	1/1	2.5 Y 4/4	60	50	37	13	vgL	zsG
CS-F04a	0	aT	mL/mC	R	86	N	1/1	2.5 Y 4/4	90	74	18	8	vgSL	G
CS-F04b	0	bT	vC	M	80	N	1/1	10 YR 5/4	10	38	28	34	CL	gsM
CS-F05	0	bT	C	W	86	N	1/1	2.5 Y 4/4	40	47	31	22	gL	smG
CS-F06	0	bT	C	R	67	N	1/1	10 YR 5/4	80	58	31	11	vgSL	zsG
CS-F07	0	bT	C	M	65	Y	1/1	7.5 YR 4/3	<5	39	33	28	CL	(g)sM
CS-F08	0	bT	C	W	72	N	1/1	10 YR 4/4	40	37	29	34	gCL	smG
CS-F09	0	bT	C	R	157	N	1/1	7.5 YR 3/3	70	35	27	38	vgCL	smG
CS-F10	0	bT	C	W	68	N	1/1	7.5 YR 3/3	10	86	6	8	LS	gmS
CS-F11	0	bT	C	M	116	N	1/1	7.5 YR 4/3	30	38	32	30	gCL	gsM
CS-F12	0	bT	C	I	72	N	2/1	5 YR 4/4	10	40	29	31	CL	gsM
CS-F13	0	bT	C	M	63	Y	1/1	5 YR 4/4	70	56	14	30	vgSCL	csG
CS-F14	0	bT	C	M	67	N	1/1	7.5 YR 5/4	70	37	33	30	vgCL	smG
CS-F15	0	dT	mL	M	67	Y	2/1	2.5 Y 5/4	40	44	36	20	gL	smG
CS-G02a	0	aT	L	R	110	N	1/1	2.5 Y 4/3	80	92	6	2	vgS	sG
CS-G02b	0	bT	C	M	74	N	1/1	2.5 Y 4/4	30	39	54	7	gZL	gsZ
CS-G03	0	bT	mC	W	74	Y	1/1	2.5 Y 5/4	50	55	29	16	gSL	msG
CS-G04	0	bT	C	W	85	N	1/1	10 YR 5/4	70	46	36	18	vgL	smG
CS-G05	0	bT	C	W	87	N	1/1	10 YR 5/4	70	47	48	5	vgSL	szG
CS-G06	0	bT	C	W	87	N	1/1	10 YR 3/4	70	32	56	12	vgZL	szG
CS-G07	0	bT	vC/eC	R	120	N	1/1	10 YR 3/4	80	70	21	9	vgSL	zsG
CS-G08	0	bT	C	W	60	N	1/1	5 YR 3/3	50	54	29	17	gSL	msG
CS-G09	0	bT	C	M	75	N	1/1	2.5 YR 3/4	20	37	27	36	gCL	gsM
CS-G10	0	bT	C	I	109	N	1/1	2.5 Y 4/4	30	34	33	33	gCL	gsM
CS-G11	0	bT	vC	M	50	Y	1/1	10 YR 4/4	20	47	32	21	gL	gsM
CS-G12	0	bT	mC	M	70	Y	1/1	2.5 YR 4/3	20	71	10	19	gSL	gmS
CS-G13	0	bT	C	M	54	Y	1/1	2.5 YR 4/4	<1	80	11	9	LS	mS
CS-G14	0	bT	C	M	75	N	2/1	5 YR 4/4	20	55	26	19	gSL	gmS
CS-G15	0	bT	C	I	75	N	1/1	10 YR 5/3	60	44	30	26	vgL	smG
CS-GH14	0	rk												
CS-H02	0	bT	C	W	59	N	1/1	2.5 Y 5/4	70	50	28	22	vgL	msG
CS-H03	0	bT	C/vC	P	76	N	1/1	2.5 Y 4/4	50	45	34	21	gL	smG
CS-H04	0	bT	C	M	98	N	1/1	2.5 Y 4/4	70	43	45	12	vgL	szG
CS-H05	0	bT	C/vC	W	80	N	1/1	7.5 YR 4/4	40	49	31	20	gL	smG
CS-H06	0	bT	vC	W	65	N	1/1	7.5 YR 4/3	20	56	27	17	gSL	gmS
CS-H12	0	bT	mC	M	78	N	1/1	10 YR 5/6	70	32	39	29	vgCL	smG
CS-H13	0	bT	C	M	117	N	1/1	2.5 YR 4/4	30	71	14	15	gSL	gmS
CS-H14	0	bT?	mC	I	59	N	1/1	2.5 YR 4/4	20	56	22	22	gSCL	gmS
CS-H15	0	bT	mC	M	73	N	1/1	2.5 YR 4/4	20	63	18	19	gSL	gmS
CS-K02	0	bT	C	W	75	N	1/1	2.5 Y 5/6	60	43	34	23	vgL	smG
CS-K03	0	bT	mC/C	R	85	N	1/1	10 YR 3/3	70	84	6	10	vgLS	msG
CS-K04	0	bT	C	W	59	N	1/1	2.5 Y 5/4	30	39	38	23	gL	gsM
CS-K05	1	bT	vC/eC	I	78	N	1/1	2.5 Y 4/4	80	46	34	20	vgL	smG
CS-K05	2	bT	C	I	91	N	1/1	10 YR 5/4	30	44	33	23	gL	gsM
CS-K09-1	0	Cv	mC	R	69	N	1/1	10 YR 3/6	10	59	33	8	SL	gzS

Appendix 1. Site Location, Site Characteristics and Geological Data, Coldstream (NTS 21 J/06W)

Sample ID	Replicate Status	Material	Compactness	Drainage	Depth to Base (cm)	Bedrock at Base	Stone Coverage	Colour	Grvl. % est.	Sand %	Silt %	Clay %	Texture 1	Texture 2
CS-K09-2	0	GF	mC	R	86	N	-	10 YR 3/4	30	92	3	5	gS	gS
CS-K09-3	0	bT	C/eC	R	118	N	-	10 YR 3/4	80	62	28	10	vgSL	zsG
CS-K11	0	bT	C	M	89	N	1/1	7.5 YR 4/4	50	53	26	21	gSCL	msG
CS-K12	0	bT	C	W	90	N	1/1	10 YR 5/4	40	43	47	10	gL	szG
CS-K13	0	bT	C	M	71	N	1/1	2.5 YR 3/4	<10	23	30	47	C	gsM
CS-K14	0	bT	mC	I	56	N	1/1	2.5 YR 4/4	<1	52	23	25	SCL	mS
CS-L02	0	bT	C/vC	W	72	Y?	2/2	10 YR 5/4	60	43	39	18	vgL	szG
CS-L05	0	bT	C	W	75	N	1/1	10 YR 5/4	70	49	38	13	vgL	szG
CS-L06	0	bT	C	W	63	N	1/1	10 YR 3/3	70	59	35	6	vgSL	zsG
CS-L11	0	bT	C	M	87	Y	1/1	5 YR 5/4	30	62	16	22	gSCL	gmS
CS-L12a	0	bT	mC	R	80	N	2/1	7.5 YR 4/4	70	70	20	10	vgSL	msG
CS-L12b	0	bT	C/vC	I	60+	N	2/1	5 YR 4/4	10	34	33	33	CL	gsM
CS-L13	0	bT	mC	M	91	N	2/1	7.5 YR 4/4	70	70	17	13	vgSL	msG
CS-L14	0	bT	mC	I	67	N	1/1	2.5 YR 4/4	<1	67	19	14	SL	mS

Appendix 1. Site Location, Site Characteristics and Geological Data, Coldstream (NTS 21 J/06W)

Sample ID	Replicate Status	Clastic Seds. %	Calc. Rocks %	Granitic %	Gabbroic %	Mafic Volc. %	M-F Volc. %	Felsic Volc. %	Quartz %	n	va-sa %	Underlying Rock Unit
CS-A11	0											OScMls
CS-A12	0											OScMls
CS-A13-1	0											SsMc
CS-A13-2	0											SsMc
CS-A14-1	0											COWc
CS-A14-2	0											COWc
CS-B03	0											DWc
CS-B10-1	0											OScMls/SsMc
CS-B10-2	0											OScMls/SsMc
CS-B11	0											SsMc
CS-B12	0											SsMc
CS-B13	0											CCIc
CS-B14	0											COWc
CS-B15	0											COWc
CS-C03	0											OScMls
CS-C04	0											OScMls
CS-C05a	0											OScMls
CS-C05b	0											OScMls
CS-C06	0											SsMc
CS-C07	0											SsMc
CS-C08a	0											SsMc
CS-C08b	0											SsMc
CS-C09	0											SsMc
CS-C10	0											SsMc
CS-C11	0											SsMc
CS-C12	0											DWc/SsMc
CS-C13	0											DWc
CS-C14	0											COWc
CS-C15	0											COWc
CS-D04	0											SsMc
CS-D05	0	89	0	0	0	9	0	0	2	98	94	DWc/SsMc
CS-D06	0	88	1	0	0	9	0	1	1	100	88	SsMc/DWc
CS-D07	0	100	0	0	0	0	0	0	0	101	100	DWc
CS-D08	1	85	1	0	1	9	2	1	1	99	81	DWc
CS-D08	2											DWc
CS-D09	0	84	0	0	0	10	2	2	2	49	92	DWc
CS-D11	0											SsMc
CS-D12	0											CCIc
CS-D13	0											DWc
CS-D14	0											COWc
CS-D15	0											COWc
CS-E02	0											DWl/SsMc
CS-E03	0											SsMc
CS-E04	0											SsMc/DWc
CS-E05	0	97	0	0	1	2	0	0	0	106	96	SsMc
CS-E06	0	100	0	0	0	0	0	0	0	101	100	DWc
CS-E07	0	99	0	0	0	0	0	0	1	101	97	SsMc/DWc
CS-E08	0	99	0	0	0	1	0	0	0	101	99	SsMc
CS-E09	0	84	0	0	0	15	0	0	1	102	69	CCIc
CS-E10	0	92	0	0	0	4	0	3	1	100	84	CCIc
CS-E11	1	94	0	0	2	2	0	2	0	50	80	DWc

Appendix 1. Site Location, Site Characteristics and Geological Data, Coldstream (NTS 21 J/06W)

Sample ID	Replicate Status	Clastic Seds. %	Calc. Rocks %	Granitic %	Gabbroic %	Mafic Volc. %	M-F Volc. %	Felsic Volc. %	Quartz %	n	va-sa %	Underlying Rock Unit
CS-E11	2	91	0	0	3	3	0	3	0	32	94	DWc
CS-E12	0	79	0	0	1	11	2	7	0	101	93	DWmv/DWc
CS-E13	0	88	0	0	1	7	0	4	0	106	89	DWmv
CS-E14	0	96	0	0	0	2	0	2	0	50	90	SSMc
CS-E15	0	78	1	1	4	5	1	6	4	101	77	COWc
CS-F02	0											DWmv/DWc
CS-F03	0											DWc
CS-F04a	0											DWc
CS-F04b	0											SSMc
CS-F05	0	67	0	0	1	30	0	1	1	100	96	SSMc
CS-F06	0	92	3	0	0	4	0	0	1	99	83	DWc
CS-F07	0	100	0	0	0	0	0	0	0	101	92	SSMc
CS-F08	0	97	1	0	0	1	0	1	0	100	93	SSMc/DWc
CS-F09	0	96	1	1	0	1	0	1	0	100	74	CCIc
CS-F10	0	67	0	0	0	9	0	24	0	33	64	CCIc
CS-F11	0	77	0	0	0	12	3	7	1	100	70	DWc
CS-F12	0	88	0	0	0	0	0	8	4	24	67	CCIc
CS-F13	0	28	0	2	3	17	1	33	17	101	96	CCIc
CS-F14	0	94	0	0	1	4	1	0	0	101	75	DWc/CCIc
CS-F15	0	30	0	0	0	64	0	6	0	99	72	DWfv
CS-G02a	0											DWc
CS-G02b	0											DWc
CS-G03	0											DWc
CS-G04	0											DWc
CS-G05	0	100	0	0	0	0	0	0	0	50	100	DWc
CS-G06	0	99	1	0	0	0	0	0	0	99	100	DWc
CS-G07	0	73	0	3	6	1	1	14	2	96	45	CCIc
CS-G08	0	85	0	0	0	4	0	10	1	98	31	CCIc
CS-G09	0	73	0	0	2	8	0	16	0	49	73	CCIc/DWc
CS-G10	0	97	0	0	0	0	0	0	3	33	100	DWc
CS-G11	0	98	0	0	0	0	0	2	0	52	98	DWc/CCIc
CS-G12	0	78	0	2	0	0	0	16	4	50	88	CCIc
CS-G13	0	71	0	0	0	0	0	0	29	7	71	CCIc
CS-G14	0	70	4	0	0	8	2	14	2	50	48	CCIc
CS-G15	0	86	2	1	2	3	1	3	2	99	69	DWmv
CS-GH14	0											CCIc
CS-H02	0											DWc
CS-H03	0											DWmv
CS-H04	0											DWc
CS-H05	0											CCIc
CS-H06	0											DWc
CS-H12	0	100	0	0	0	0	0	0	0	101	100	CMOc
CS-H13	0	79	0	9	0	2	2	5	3	100	80	CCIc
CS-H14	0	100	0	0	0	0	0	0	0	10	100	CCIc
CS-H15	0	64	0	0	3	18	0	12	3	33	42	CCIc
CS-K02	0											DWmv
CS-K03	0											CCIc
CS-K04	0											CCIc
CS-K05	1											CCIc
CS-K05	2											CCIc
CS-K09-1	0											DCGc

Appendix 1. Site Location, Site Characteristics and Geological Data, Coldstream (NTS 21 J/06W)

Sample ID	Replicate Status	Clastic Seds. %	Calc. Rocks %	Granitic %	Gabbroic %	Mafic Volc. %	M-F Volc. %	Felsic Volc. %	Quartz %	n	va-sa %	Underlying Rock Unit
CS-K09-2	0											DCGc
CS-K09-3	0											DCGc
CS-K11	0											CMOc
CS-K12	0	97	0	0	0	2	0	1	0	100	96	CMOc
CS-K13	0	100	0	0	0	0	0	0	0	11	91	CMOc
CS-K14	0	100	0	0	0	0	0	0	0	1	100	CClc
CS-L02	0											DCGfv
CS-L05	0											DCGfv
CS-L06	0											DCGfv
CS-L11	0											CMOc
CS-L12a	0	92	0	0	1	1	0	6	0	100	96	CMOc
CS-L12b	0	98	0	0	0	2	0	0	0	50	88	CMOc
CS-L13	0	97	0	0	1	0	0	2	0	100	95	CClc
CS-L14	0	50	0	50	0	0	0	0	0	2	100	CClc

Appendix 2.

Analytical Data, Coldstream (NTS 21 J/06)

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Ag @ ppm	Al @ %	As # ppm	Au # ppb	Ba # ppm	Be @ ppm	Bi $ ppm	Br # ppm	Ca @ %	Cd @ ppm	Ce # ppm	Co # ppm
CS-A11	0	bT	<0.3	9.43	13.9	6	300	2	0.1	<0.5	0.55	<0.3	72	20
CS-A12	0	bT	<0.3	9.39	14.6	3	420	2	0.1	3.0	0.59	<0.3	71	20
CS-A13-1	0	bT	<0.3	8.00	17.2	<2	260	1	0.1	10.8	0.73	<0.3	73	14
CS-A13-2	0	dT	0.3	5.55	9.2	7	380	1	<0.1	8.0	0.41	<0.3	87	11
CS-A13-2	8	dT	<0.3	3.36	9.6	<2	320	1	0.1	8.1	0.34	<0.3	78	10
CS-A14-1	0	bT	<0.3	4.61	11.9	<2	220	1	0.1	4.1	0.26	<0.3	77	17
CS-A14-2	0	bT	<0.3	11.49	48.8	<2	650	3	0.4	11.1	0.20	<0.3	160	47
CS-B03	0	bT	<0.3	8.54	14.7	2	430	1	0.1	10.1	0.16	<0.3	72	16
CS-B10-1	1	bT	<0.3	4.35	12.2	6	390	2	0.1	<0.5	1.92	<0.3	72	20
CS-B10-2	2	bT	<0.3	4.11	12.2	4	510	2	0.1	<0.5	1.84	<0.3	68	19
CS-B11	0	bT	<0.3	7.94	11.1	<2	430	1	0.1	10.8	0.30	<0.3	65	11
CS-B12	0	bT	<0.3	9.63	17.1	<2	440	2	0.1	4.3	0.68	<0.3	71	17
CS-B13	0	bT	<0.3	8.93	16.2	2	400	2	0.2	3.4	0.62	<0.3	69	18
CS-B14	0	bT	<0.3	7.16	11.2	<2	400	1	<0.1	4.1	0.31	<0.3	74	15
CS-B15	0	bT	<0.3	6.10	13.2	<2	480	2	0.2	2.8	0.33	<0.3	78	16
CS-C03	0	bT	<0.3	10.08	9.0	<2	420	1	0.2	11.9	0.25	<0.3	78	13
CS-C04	0	bT	<0.3	9.24	13.4	4	420	2	0.1	2.3	0.44	<0.3	84	16
CS-C04	8	bT	<0.3	8.59	14.2	<2	390	2	0.1	3.3	0.42	<0.3	82	15
CS-C05a-1	0	dT	<0.3	11.57	64.2	5	330	2	0.2	5.4	0.34	<0.3	84	20
CS-C05a-2	0	rk	<0.3	11.65	103	5	560	2	0.2	5.2	0.39	<0.3	100	23
CS-C05b	0	bT	<0.3	8.45	12.8	5	360	2	0.1	<0.5	0.50	<0.3	75	14
CS-C06	0	bT	<0.3	8.05	12.6	4	410	2	0.1	3.1	0.22	<0.3	85	18
CS-C07	0	bT	<0.3	8.41	10.6	<2	300	2	0.1	10.3	0.29	<0.3	76	13
CS-C08a	0	aT	<0.3	10.99	25.8	<2	590	3	0.2	20.6	0.66	<0.3	200	24
CS-C08b	0	bT	<0.3	7.78	11.9	<2	380	2	0.1	8.0	0.20	<0.3	82	16
CS-C09	0	bT	<0.3	7.59	12.1	3	510	2	0.2	12.2	0.36	<0.3	81	17
CS-C10	0	bT	<0.3	5.74	12.3	<2	410	2	0.2	2.9	0.39	<0.3	82	15
CS-C11	0	bT	<0.3	8.23	12.9	<2	410	2	0.2	5.4	0.22	<0.3	79	16
CS-C12	0	bT	0.3	6.77	7.6	<2	360	1	0.1	2.1	0.29	<0.3	79	13
CS-C13	0	bT	0.4	10.01	28.6	<2	340	2	0.3	25.1	0.10	0.4	66	15
CS-C14	0	bT	<0.3	8.99	13.1	6	360	2	0.2	<0.5	0.43	<0.3	75	20
CS-C15	0	bT	<0.3	9.24	12.2	<2	400	2	0.1	<0.5	0.83	<0.3	77	17
CS-D04	0	bT	<0.3	5.51	20.1	3	510	2	0.2	7.5	0.22	<0.3	96	18
CS-D05	0	bT	0.3	4.87	19.4	<2	330	2	0.2	4.3	0.22	<0.3	80	14
CS-D06	0	bT	<0.3	4.27	24.0	<2	460	2	0.2	2.0	0.49	0.4	72	16
CS-D07	0	dT	0.3	3.93	15.2	<2	300	1	0.2	3.3	0.17	<0.3	73	9
CS-D08	1	bT	<0.3	4.09	12.2	3	490	2	0.2	2.5	0.22	<0.3	75	18
CS-D08	2	bT	<0.3	4.69	14.1	<2	580	2	0.2	<0.5	0.24	<0.3	81	18
CS-D09	0	bT	<0.3	4.78	10.9	<2	350	1	0.2	3.5	0.11	<0.3	81	16
CS-D11	0	bT	<0.3	4.84	15.5	6	510	2	0.2	1.1	0.43	<0.3	72	17
CS-D12	0	bT	<0.3	9.41	16.0	5	620	2	0.2	1.9	0.33	<0.3	76	20
CS-D13	0	bT	<0.3	6.24	26.4	<2	410	2	0.3	2.8	0.03	<0.3	110	22
CS-D14	0	bT	0.3	5.41	13.3	43	420	1	0.2	3.0	0.09	<0.3	64	16
CS-D15	0	bT	<0.3	4.86	26.0	<2	470	2	0.4	28.5	0.22	<0.3	110	41
CS-E02	0	bT	0.4	4.61	11.8	<2	260	1	0.2	4.9	0.41	<0.3	78	13
CS-E03	0	bT	<0.3	3.53	14.2	<2	310	1	0.2	15.9	0.13	<0.3	65	16

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Ag @ ppm	Al @ %	As # ppm	Au # ppb	Ba # ppm	Be @ ppm	Bi $ ppm	Br # ppm	Ca @ %	Cd @ ppm	Ce # ppm	Co # ppm
CS-E04	0	bT	0.3	3.24	10.3	4	400	1	0.2	2.7	0.10	<0.3	79	18
CS-E05	0	bT	<0.3	3.54	11.6	3	300	1	0.2	7.8	0.07	<0.3	75	16
CS-E06	0	dT	<0.3	4.64	12.2	<2	470	2	0.3	2.5	0.18	<0.3	91	23
CS-E07	0	bT	<0.3	6.13	8.3	<2	450	2	0.2	3.3	0.09	<0.3	73	15
CS-E08	0	bT	0.4	3.55	8.7	<2	380	1	0.1	7.8	0.27	<0.3	96	13
CS-E09	0	bT	0.3	5.81	19.5	<2	280	2	0.2	12.3	0.21	0.3	63	16
CS-E10	0	bT	0.4	3.73	13.9	<2	380	1	0.1	5.1	0.18	<0.3	74	14
CS-E11	1	bT	<0.4	7.21	17.8	<2	590	2		<0.5	0.18	<0.5	101	18
CS-E11	2	bT	0.4	6.45	16.3	3	480	2		<0.5	0.22	<0.5	87	16
CS-E12	0	bT	<0.4	7.35	14.2	<2	620	2		<0.5	0.27	<0.5	84	18
CS-E13	0	bT	<0.4	7.16	13.9	<2	520	2		<0.5	0.21	<0.5	94	19
CS-E14	0	dT	0.4	7.33	9.2	<2	380	2		6.7	0.12	<0.5	136	16
CS-E15	0	bT	<0.4	7.42	14.4	<2	630	2		3.0	0.21	<0.5	94	16
CS-F02	0	bT	<0.3	3.95	23.0	<2	370	1	0.2	<0.5	0.37	<0.3	77	13
CS-F03	0	bT	<0.3	3.41	16.5	<2	310	1	0.1	3.5	0.34	<0.3	85	14
CS-F04a	0	aT	0.3	3.01	37.7	5	300	1	0.2	22.0	0.14	<0.3	110	15
CS-F04b	0	bT	<0.3	3.37	18.4	<2	500	2	0.2	2.8	0.19	<0.3	75	19
CS-F05	0	bT	0.3	2.53	20.8	4	380	1	0.2	2.8	0.16	0.4	85	16
CS-F06	0	bT	<0.3	6.85	21.1	<2	320	2	0.2	7.8	0.13	<0.3	69	15
CS-F07	0	bT	<0.3	7.20	7.9	<2	420	2	0.2	<0.5	0.05	<0.3	68	22
CS-F08	0	bT	<0.3	4.41	12.7	<2	360	2	0.2	2.9	0.14	<0.3	80	18
CS-F09	0	bT	0.3	3.67	21.9	<2	640	2	0.2	<0.5	0.46	<0.3	74	23
CS-F10	0	bT	<0.3	4.82	36.4	4	570	2	0.7	7.0	1.07	<0.3	93	31
CS-F11	0	bT	0.5	6.63	17.5	<2	400	2		3.3	0.18	<0.5	92	19
CS-F12	0	bT	<0.4	7.67	25.6	2	450	2		<0.5	0.34	<0.5	97	16
CS-F13	0	bT	<0.4	9.62	35.7	<2	410	2		11.0	0.04	<0.5	112	14
CS-F14	0	bT	0.4	7.65	15.5	<2	510	2		<0.5	0.29	<0.5	93	15
CS-F15	0	dT	0.5	6.23	12.9	<2	300	<2		10.6	0.14	<0.5	82	13
CS-F15	8	dT	0.6	5.93	13.5	<2	330	<2		9.5	0.15	<0.5	78	14
CS-G02a	0	aT	0.4	2.60	29.0	<2	420	2	0.3	11.9	0.17	<0.3	230	23
CS-G02b	0	bT	<0.3	2.53	12.2	<2	290	1	0.1	4.5	0.24	<0.3	64	12
CS-G02b	8	bT	0.4	3.14	12.2	<2	220	1	0.1	4.7	0.27	<0.3	67	11
CS-G03	0	bT	<0.3	3.35	24.7	<2	330	1	0.2	5.4	0.11	<0.3	76	18
CS-G04	0	bT	<0.3	5.72	24.2	<2	430	1	0.2	5.2	0.26	<0.3	82	18
CS-G05	0	bT	0.4	3.76	6.8	<2	280	1	0.1	8.2	0.27	<0.3	73	11
CS-G06	0	bT	0.4	3.65	7.7	<2	240	<1	0.2	10.6	0.17	0.4	55	9
CS-G07	0	bT	<0.3	2.89	43.3	4	560	2	0.4	22.9	0.22	0.3	141	29
CS-G08	0	bT	<0.3	5.41	22.4	2	450	2	0.4	15.4	0.43	<0.3	66	25
CS-G09	0	bT	<0.3	6.32	25.5	6	500	2	0.3	<0.5	0.52	<0.3	74	28
CS-G10	0	bT	<0.3	4.50	12.7	<2	570	2	0.2	3.8	0.10	<0.3	97	22
CS-G11	0	bT	0.5	6.74	12.2	2	330	<2		6.1	0.08	<0.5	81	14
CS-G12	0	bT	0.5	9.35	104	7	520	3		2.4	0.15	<0.5	88	19
CS-G13	0	bT	0.6	10.58	48.3	<2	350	3		1.3	0.09	<0.5	106	11
CS-G13	8	bT	<0.3	13.20	42.1	<2	370	3	0.5	1.9	0.17	<0.3	82	11
CS-G14	0	bT	0.4	6.98	25.7	<2	290	2		2.3	0.10	<0.5	87	14
CS-G14	8	bT	<0.3	9.21	26.6	2	330	2	0.2	1.9	0.16	<0.3	70	15

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Ag @ ppm	Al @ %	As # ppm	Au # ppb	Ba # ppm	Be @ ppm	Bi $ ppm	Br # ppm	Ca @ %	Cd @ ppm	Ce # ppm	Co # ppm
CS-G15	0	bT	0.4	7.70	15.2	<2	520	2		<0.5	0.31	<0.5	88	16
CS-GH14	0	rk	<0.3	6.78	54.5	4	260	1	0.2	<0.5	0.11	<0.3	43	15
CS-H02	0	bT	0.3	3.84	28.8	3	340	1	0.2	8.3	0.13	0.3	63	11
CS-H03	0	bT	0.3	2.70	32.1	3	320	1	0.2	3.6	0.16	<0.3	74	17
CS-H04	0	bT	0.4	2.88	25.8	2	290	1	0.1	6.6	0.21	<0.3	69	14
CS-H05	0	bT	<0.3	4.79	16.8	<2	290	1	0.2	2.3	0.09	<0.3	77	17
CS-H06	0	bT	<0.3	7.41	13.4	<2	380	2	0.3	2.9	0.35	<0.3	76	19
CS-H12	0	bT	0.6	7.81	9.9	<2	390	2		11.5	0.01	<0.5	97	11
CS-H13	0	bT	<0.4	7.24	98.7	<2	470	2		<0.5	0.18	<0.5	119	19
CS-H13	8	bT	<0.3	5.72	91.0	3	430	2	0.2	<0.5	0.20	<0.3	96	19
CS-H14	0	bT?	<0.4	7.94	28.9	46	250	3		<0.5	0.33	<0.5	53	14
CS-H14	8	bT?	<0.3	6.47	28.7	40	350	3	0.3	2.3	0.38	<0.3	43	15
CS-H15	0	bT	0.4	7.77	32.7	<2	440	2		<0.5	0.19	<0.5	122	15
CS-H15	8	bT	0.3	5.70	32.5	<2	340	2	0.3	<0.5	0.23	<0.3	104	16
CS-K02	0	bT	0.4	2.70	50.9	<2	380	2	0.3	6.2	0.17	0.7	80	22
CS-K03	0	bT	0.5	2.74	55.4	<2	340	2	0.3	20.4	0.25	0.3	87	20
CS-K04	0	bT	0.3	2.90	32.9	<2	240	1	0.2	12.3	0.20	<0.3	68	15
CS-K05	1	bT	0.4	2.80	41.2	<2	340	1	0.3	12.0	0.20	<0.3	69	18
CS-K05	2	bT	0.4	9.06	37.2	8	470	2	0.2	0.9	0.30	<0.3	86	17
CS-K09-1	0	Cv	<0.3	3.02	30.7	<2	300	1	0.2	12.1	0.18	<0.3	74	13
CS-K09-2	0	GF	0.4	3.07	49.2	<2	250	2	0.3	30.6	0.15	<0.3	90	18
CS-K09-3	0	bT	<0.3	3.71	23.3	3	290	2	0.3	9.6	0.43	<0.3	99	14
CS-K11	0	bT	0.4	4.80	44.0	<2	270	2	0.4	6.9	0.05	<0.3	82	17
CS-K12	0	bT	0.3	2.84	8.4	4	220	1	0.2	8.3	0.13	<0.3	73	12
CS-K13	0	bT	<0.4	8.90	10.1	<2	200	2		<0.5	0.05	<0.5	101	11
CS-K14	0	bT	0.4	8.08	32.6	5	480	3		1.8	0.34	<0.5	69	20
CS-L02	0	bT	0.4	2.62	14.8	<2	240	1	0.2	9.9	0.23	<0.3	75	16
CS-L02	8	bT	0.3	2.10	13.5	<2	360	1	0.2	9.5	0.21	0.6	73	14
CS-L05	0	bT	<0.3	3.31	19.3	<2	370	1	0.2	6.2	0.20	<0.3	93	15
CS-L06	0	bT	0.4	3.27	15.5	<2	250	1	0.2	18.8	0.37	<0.3	78	12
CS-L11	0	bT	0.5	5.84	17.6	3	300	2	0.4	3.2	0.03	<0.3	100	18
CS-L12a	0	bT	<0.3	4.34	19.4	<2	300	1	0.3	21.0	0.11	<0.3	74	13
CS-L12b	0	bT	<0.3	4.58	8.1	<2	220	1	0.2	1.4	0.04	<0.3	66	10
CS-L13	0	bT	0.6	6.71	15.8	<2	280	<2		23.2	0.07	<0.5	110	16
CS-L14	0	bT	<0.4	8.16	29.1	<2	360	3		<0.5	0.12	<0.5	93	13
CS-L14	8	bT	<0.3	7.32	32.3	<2	390	3	0.6	1.8	0.15	<0.3	78	14

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Cr # ppm	Cs # ppm	Cu @ ppm	Eu # ppm	Fe # %	Ge $ ppm	Hf # ppm	Hg * ppb	K @ %	La # ppm	Lu # ppm	Mg @ %
CS-A11	0	bT	110	4	27	1.8	4.52	0.8	11	43	2.30	37.8	0.57	1.49
CS-A12	0	bT	120	4	30	2.0	4.62	0.8	11	44	2.37	39.0	0.60	1.58
CS-A13-1	0	bT	140	4	30	1.1	4.24	0.3	10	46	2.11	37.2	0.38	1.43
CS-A13-2	0	dT	120	6	11	1.1	3.64	0.7	14	30	2.12	38.7	0.40	0.92
CS-A13-2	8	dT	133	6	11	0.9	3.47	0.7	13	26	1.71	37.4	0.35	0.82
CS-A14-1	0	bT	96	4	20	1.7	3.52	0.7	11	37	1.85	38.7	0.50	1.22
CS-A14-2	0	bT	140	10	39	3.3	7.59	1.0	8	69	4.42	74.3	0.91	2.74
CS-B03	0	bT	120	5	24	1.3	4.05	0.8	12	50	2.03	35.7	0.45	1.30
CS-B10-1	1	bT	110	5	28	1.6	4.34	0.6	10	28	2.47	36.3	0.55	1.57
CS-B10-2	2	bT	110	4	27	1.5	4.11	0.5	8	27	2.39	37.1	0.50	1.56
CS-B11	0	bT	96	3	19	1.2	3.69	0.5	9	40	1.61	32.3	0.42	1.21
CS-B12	0	bT	120	6	27	1.7	4.53	0.6	7	50	2.72	37.8	0.53	1.74
CS-B13	0	bT	111	3	24	1.5	3.79	0.6	9	39	2.11	34.5	0.45	1.40
CS-B14	0	bT	110	4	31	1.2	3.85	0.6	8	26	2.14	36.7	0.41	1.45
CS-B15	0	bT	110	4	25	1.9	4.29	0.7	8	36	2.15	41.9	0.55	1.47
CS-C03	0	bT	130	6	26	1.2	3.33	0.5	8	82	1.75	30.3	0.41	1.16
CS-C04	0	bT	97	4	25	1.8	4.01	0.8	10	29	2.10	40.6	0.54	1.40
CS-C04	8	bT	99	3	25	1.7	3.87	1.2	9	30	2.02	41.2	0.50	1.28
CS-C05a-1	0	dT	160	5	18	1.1	4.52	0.5	7	38	3.17	37.9	0.36	0.71
CS-C05a-2	0	rk	180	5	23	1.8	5.36	0.4	7	65	3.73	46.0	0.53	0.67
CS-C05b	0	bT	93	4	24	1.9	4.09	0.7	9	33	2.14	42.9	0.60	1.38
CS-C06	0	bT	110	4	25	1.5	4.29	0.5	9	34	2.19	42.9	0.54	1.39
CS-C07	0	bT	91	4	21	1.3	3.33	0.5	10	40	1.84	36.8	0.47	1.19
CS-C08a	0	aT	160	6	46	2.1	5.47	0.3	7	118	2.52	40.9	0.53	1.33
CS-C08b	0	bT	120	4	21	1.5	3.90	0.8	9	56	1.91	38.2	0.44	1.18
CS-C09	0	bT	100	6	20	2.2	4.19	0.3	8	73	1.97	40.9	0.61	1.14
CS-C10	0	bT	100	4	24	1.7	3.85	0.8	11	37	1.95	42.3	0.55	1.22
CS-C11	0	bT	110	4	28	1.4	4.04	0.4	7	62	2.30	37.8	0.42	1.28
CS-C12	0	bT	110	4	17	1.5	3.63	0.6	9	24	2.22	43.3	0.50	1.45
CS-C13	0	bT	120	8	25	1.2	5.01	0.1	7	101	2.17	33.8	0.43	0.86
CS-C14	0	bT	110	5	28	1.8	4.13	0.5	8	38	2.28	40.1	0.55	1.52
CS-C15	0	bT	130	5	19	1.9	4.27	0.6	10	33	2.46	43.2	0.59	1.58
CS-D04	0	bT	120	7	26	1.7	4.22	0.8	12	50	2.37	45.6	0.51	1.48
CS-D05	0	bT	110	5	24	1.2	3.35	0.6	15	41	1.84	36.3	0.52	1.19
CS-D06	0	bT	130	7	29	1.9	4.38	0.9	9	30	2.35	42.9	0.61	1.40
CS-D07	0	dT	110	6	16	1.2	3.13	0.9	12	27	1.62	40.8	0.52	0.30
CS-D08	1	bT	100	5	23	1.5	3.94	0.8	9	44	1.89	39.7	0.50	1.03
CS-D08	2	bT	120	6	26	1.6	4.39	0.7	12	53	2.14	42.1	0.55	1.13
CS-D09	0	bT	100	5	21	1.3	3.62	0.8	8	90	1.92	41.4	0.46	0.94
CS-D11	0	bT	110	6	28	1.9	4.48	0.5	10	59	1.99	42.1	0.60	1.20
CS-D12	0	bT	120	5	32	1.7	4.73	0.6	9	40	2.71	42.2	0.55	1.60
CS-D13	0	bT	150	14	38	2.4	2.57	0.9	8	30	2.70	59.4	0.73	0.41
CS-D14	0	bT	120	4	28	1.1	4.47	0.8	11	33	2.11	33.4	0.43	1.12
CS-D15	0	bT	150	11	27	1.8	6.00	0.2	9	96	2.10	30.3	0.67	1.09
CS-E02	0	bT	80	4	17	1.3	3.11	0.6	18	18	1.57	38.5	0.51	0.99
CS-E03	0	bT	87	10	29	1.1	3.36	0.5	10	64	1.32	33.9	0.40	0.86

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Cr # ppm	Cs # ppm	Cu @ ppm	Eu # ppm	Fe # %	Ge $ ppm	Hf # ppm	Hg * ppb	K @ %	La # ppm	Lu # ppm	Mg @ %
CS-E04	0	bT	94	6	25	1.3	4.08	0.8	11	42	1.73	41.6	0.52	0.87
CS-E05	0	bT	110	6	30	1.2	4.14	0.8	10	93	1.71	37.8	0.45	0.88
CS-E06	0	dT	100	6	29	1.8	4.35	0.6	11	74	2.00	41.5	0.54	0.92
CS-E07	0	bT	130	6	21	1.2	3.78	0.8	11	12	2.50	39.9	0.48	1.54
CS-E08	0	bT	99	5	18	1.3	3.52	0.2	12	32	1.76	36.5	0.53	0.83
CS-E09	0	bT	130	8	16	1.5	4.00	0.6	13	92	1.93	33.7	0.48	1.04
CS-E10	0	bT	120	5	13	1.3	3.87	0.9	10	38	1.83	37.8	0.48	1.07
CS-E11	1	bT	135	7	29	2.3	4.66		10	53	2.00	46.8	0.63	1.13
CS-E11	2	bT	121	8	30	2.0	4.17		8	50	1.96	41.1	0.52	1.09
CS-E12	0	bT	129	6	29	2.0	4.50		9	69	1.98	36.3	0.50	1.13
CS-E13	0	bT	139	7	31	1.9	4.77		9	52	1.84	38.5	0.59	1.04
CS-E14	0	dT	141	8	17	1.9	4.06		11	40	1.65	41.7	0.56	1.37
CS-E15	0	bT	127	6	30	2.3	4.45		9	42	1.99	42.0	0.62	0.94
CS-F02	0	bT	100	11	20	1.6	3.89	0.8	10	16	1.78	40.6	0.54	1.09
CS-F03	0	bT	99	4	18	1.3	3.20	0.6	13	41	1.44	36.6	0.46	0.98
CS-F04a	0	aT	110	16	25	1.6	4.00	0.5	15	77	1.42	42.9	0.56	0.86
CS-F04b	0	bT	110	10	29	1.6	4.11	0.8	9	50	2.21	38.7	0.54	1.07
CS-F05	0	bT	110	7	21	1.5	3.62	0.9	11	30	1.58	42.9	0.52	0.93
CS-F06	0	bT	94	9	29	1.1	3.44	0.6	10	59	2.01	32.2	0.45	1.17
CS-F07	0	bT	130	16	30	1.0	5.09	1.4	5	40	3.93	38.0	0.38	1.95
CS-F08	0	bT	110	7	28	1.4	4.20	1.1	9	92	1.99	40.5	0.52	0.89
CS-F09	0	bT	110	7	40	1.9	4.82	0.9	8	187	2.14	43.8	0.62	1.03
CS-F10	0	bT	120	11	21	2.2	6.42	1.0	7	35	1.65	33.3	0.60	1.90
CS-F11	0	bT	128	7	29	1.5	4.36		10	30	1.62	35.6	0.45	1.20
CS-F12	0	bT	149	16	26	2.3	5.01		11	40	2.12	41.4	0.72	1.28
CS-F13	0	bT	136	39	15	1.1	4.98		6	100	3.24	61.5	0.36	1.25
CS-F14	0	bT	129	9	27	1.7	4.41		10	47	2.06	38.1	0.54	1.15
CS-F15	0	dT	108	5	20	1.3	3.51		10	44	1.18	33.9	0.39	0.86
CS-F15	8	dT	114	4	22	1.2	3.70		9	46	1.18	38.1	0.37	0.87
CS-G02a	0	aT	151	10	22	1.9	4.42	0.5	19	58	1.38	55.7	0.75	0.80
CS-G02b	0	bT	82	5	14	1.1	2.86	0.5	12	22	1.22	34.7	0.48	0.71
CS-G02b	8	bT	76	5	16	1.2	2.75	0.4	15	22	1.41	34.5	0.46	0.84
CS-G03	0	bT	102	8	18	1.0	3.68	0.7	8	33	1.63	36.0	0.45	1.00
CS-G04	0	bT	117	9	16	1.4	3.77	0.4	10	30	1.74	39.7	0.49	1.21
CS-G05	0	bT	104	7	15	1.2	2.98	0.2	13	37	1.33	37.0	0.50	0.78
CS-G06	0	bT	106	11	13	0.9	3.44	0.2	9	31	1.24	30.5	0.44	0.61
CS-G07	0	bT	150	13	32	1.5	5.46	0.2	5	87	1.28	32.2	0.53	0.89
CS-G08	0	bT	151	15	21	1.1	5.53	0.2	7	29	1.88	32.3	0.57	1.75
CS-G09	0	bT	140	12	34	2.5	6.37	0.2	6	54	2.27	41.2	0.73	1.85
CS-G10	0	bT	134	21	33	2.2	4.48	0.4	6	56	3.02	48.1	0.73	0.36
CS-G11	0	bT	155	17	20	1.3	4.21		12	32	1.88	33.7	0.46	1.23
CS-G12	0	bT	112	147	20	1.6	5.14		10	25	3.02	35.6	0.63	1.27
CS-G13	0	bT	101	65	4	1.1	4.54		9	12	4.53	50.4	0.62	1.19
CS-G13	8	bT	88	61	4	0.9	4.41	0.4	8	14	6.33	42.0	0.52	2.10
CS-G14	0	bT	112	15	20	1.3	4.11		11	26	1.84	45.6	0.49	1.10
CS-G14	8	bT	111	16	18	1.3	4.07	0.6	9	23	2.22	39.2	0.49	1.40

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Cr # ppm	Cs # ppm	Cu @ ppm	Eu # ppm	Fe # %	Ge $ ppm	Hf # ppm	Hg * ppb	K @ %	La # ppm	Lu # ppm	Mg @ %
CS-G15	0	bT	125	10	29	2.1	4.61		9	48	1.95	48.7	0.59	1.10
CS-GH14	0	rk	65	11	16	0.7	3.00	0.7	6	8	1.83	25.1	0.40	1.28
CS-H02	0	bT	120	14	15	1.0	3.99	0.4	7	34	1.83	33.4	0.41	1.08
CS-H03	0	bT	116	10	20	1.2	3.82	0.6	11	23	1.66	36.9	0.50	0.94
CS-H04	0	bT	102	7	15	1.1	3.34	0.4	11	22	1.49	38.3	0.44	0.86
CS-H05	0	bT	115	7	29	1.0	3.97	0.6	8	14	1.87	36.7	0.52	1.38
CS-H06	0	bT	123	9	29	1.8	4.64	0.4	8	22	2.63	39.8	0.61	1.63
CS-H12	0	bT	151	12	25	1.8	4.27		9	112	1.83	48.7	0.63	0.40
CS-H13	0	bT	128	56	22	3.0	4.89		12	11	2.16	61.5	0.89	1.09
CS-H13	8	bT	112	49	17	2.3	4.61	0.4	11	15	2.29	52.4	0.81	1.13
CS-H14	0	bT?	108	33	15	1.3	4.25		6	14	3.31	38.9	0.57	1.45
CS-H14	8	bT?	104	32	12	1.3	4.07	0.8	5	16	3.73	34.5	0.54	1.58
CS-H15	0	bT	102	16	23	2.2	4.32		14	12	2.47	58.0	0.84	1.27
CS-H15	8	bT	101	15	19	1.9	4.30	0.3	12	15	2.66	52.4	0.76	1.30
CS-K02	0	bT	123	15	33	1.5	4.59	0.6	9	26	1.99	38.2	0.52	1.08
CS-K03	0	bT	137	24	21	1.5	5.48	0.2	10	62	1.75	34.0	0.59	0.96
CS-K04	0	bT	99	10	21	1.4	3.68	0.5	10	37	1.66	37.1	0.50	0.91
CS-K05	1	bT	113	13	24	1.3	4.10	0.6	9	40	1.79	36.3	0.50	0.95
CS-K05	2	bT	110	12	27	1.7	4.08	1.0	14	23	2.23	44.6	0.59	1.29
CS-K09-1	0	Cv	100	8	18	1.0	3.59	0.4	11	56	1.38	33.9	0.54	0.77
CS-K09-2	0	GF	122	10	20	1.2	4.14	0.3	12	94	1.49	37.3	0.55	0.73
CS-K09-3	0	bT	91	9	16	1.2	3.20	0.3	10	33	1.99	35.6	0.63	0.91
CS-K11	0	bT	129	24	18	1.4	4.62	0.8	11	37	1.66	42.8	0.67	0.70
CS-K12	0	bT	93	4	13	1.4	3.25	0.7	14	24	1.27	40.5	0.56	0.63
CS-K13	0	bT	178	7	30	1.5	5.64		6	<5	1.02	51.5	0.62	0.36
CS-K14	0	bT	93	18	22	1.0	4.51		6	10	3.00	34.2	0.50	1.43
CS-L02	0	bT	105	7	17	1.4	3.51	0.4	10	25	1.57	38.7	0.48	0.84
CS-L02	8	bT	100	7	16	1.1	3.36	0.3	10	26	1.49	37.7	0.45	0.80
CS-L05	0	bT	91	7	19	1.4	3.60	0.5	14	20	1.62	39.7	0.58	0.96
CS-L06	0	bT	92	5	17	1.4	3.29	0.3	18	41	1.36	37.0	0.64	0.81
CS-L11	0	bT	150	11	16	1.4	3.12	0.6	22	23	2.11	46.0	0.91	0.70
CS-L12a	0	bT	110	6	15	1.2	4.06	0.5	14	51	1.43	36.7	0.60	0.70
CS-L12b	0	bT	110	6	18	1.2	4.08	0.7	11	8	1.77	34.6	0.64	0.34
CS-L13	0	bT	132	8	19	1.5	4.20		14	71	1.40	42.0	0.60	0.61
CS-L14	0	bT	71	24	18	1.4	3.82		10	<5	3.19	44.4	0.62	1.14
CS-L14	8	bT	67	19	15	1.2	3.81	0.7	10	<5	3.72	46.4	0.70	1.32

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Mn @ ppm	Mo @ ppm	Mo # ppm	Na # %	Nd # ppm	Ni @ ppm	Ni # ppm	P @ %	Pb @ ppm	Rb # ppm	S @ ppm	Sb # ppm
CS-A11	0	bT	952	<1	6	1.40	35	65	68	0.067	32	86	0.013	0.9
CS-A12	0	bT	937	1	4	1.29	38	67	69	0.060	37	80	0.013	0.6
CS-A13-1	0	bT	513	<1	<1	1.31	28	58	65	0.069	44	94	0.057	0.9
CS-A13-2	0	dT	174	<1	<1	1.30	34	48	46	0.032	22	110	0.014	0.8
CS-A13-2	8	dT	152	1	<1	1.27	23	47	46	0.027	8	127	0.007	0.6
CS-A14-1	0	bT	874	<1	<1	1.47	36	55	57	0.037	29	50	0.010	0.9
CS-A14-2	0	bT	3242	5	5	0.71	53	77	79	0.078	64	172	0.018	2.7
CS-B03	0	bT	1027	2	<1	1.13	19	60	65	0.048	31	75	0.026	0.9
CS-B10-1	1	bT	1395	1	<1	1.24	36	67	68	0.063	30	75	0.023	0.7
CS-B10-2	2	bT	1103	1	<1	1.36	31	64	71	0.062	34	87	0.027	0.6
CS-B11	0	bT	338	2	<1	1.31	22	55	60	0.052	24	53	0.039	0.7
CS-B12	0	bT	589	<1	2	1.23	30	75	75	0.066	27	97	0.011	1.4
CS-B13	0	bT	1236	<1	<1	1.37	26	56	62	0.058	54	79	0.028	0.9
CS-B14	0	bT	751	2	<1	1.38	30	60	65	0.044	26	69	0.012	0.6
CS-B15	0	bT	816	<1	1	1.37	33	65	65	0.036	32	91	0.009	0.9
CS-C03	0	bT	639	<1	2	0.88	22	67	71	0.074	34	71	0.024	0.8
CS-C04	0	bT	782	<1	<1	1.49	27	53	55	0.049	33	74	0.014	0.8
CS-C04	8	bT	774	<1	<1	1.44	31	53	75	0.045	29	55	0.011	0.9
CS-C05a-1	0	dT	395	<1	<1	1.21	20	89	114	0.044	35	120	0.030	4.0
CS-C05a-2	0	rk	678	<1	<1	1.05	36	106	118	0.063	43	160	0.028	5.8
CS-C05b	0	bT	770	2	<1	1.56	35	53	62	0.070	30	87	0.010	0.8
CS-C06	0	bT	989	<1	<1	1.27	34	62	60	0.047	37	83	0.010	1.2
CS-C07	0	bT	713	2	<1	1.32	29	49	50	0.053	32	67	0.019	0.6
CS-C08a	0	aT	1576	2	<1	0.88	32	97	108	0.122	49	83	0.058	1.3
CS-C08b	0	bT	687	1	5	1.25	29	67	71	0.042	30	68	0.018	1.1
CS-C09	0	bT	1394	1	<1	1.16	38	62	70	0.064	37	86	0.021	0.7
CS-C10	0	bT	893	<1	<1	1.44	38	56	62	0.040	32	78	0.008	0.9
CS-C11	0	bT	1715	<1	<1	1.08	27	74	79	0.039	23	73	0.015	1.0
CS-C12	0	bT	636	<1	2	1.37	30	62	90	0.042	32	79	0.010	0.7
CS-C13	0	bT	593	<1	4	0.57	28	56	76	0.189	51	98	0.034	2.1
CS-C14	0	bT	1254	1	<1	1.42	28	64	70	0.062	34	69	0.012	0.9
CS-C15	0	bT	493	<1	<1	1.37	33	65	72	0.062	27	120	0.011	0.9
CS-D04	0	bT	1264	1	<1	1.16	38	72	71	0.045	32	90	0.012	1.7
CS-D05	0	bT	890	<1	<1	1.06	28	57	50	0.043	26	74	0.011	1.5
CS-D06	0	bT	886	<1	2	1.04	36	72	71	0.046	23	110	0.008	1.5
CS-D07	0	dT	181	2	4	0.41	27	38	40	0.055	20	130	0.013	0.9
CS-D08	1	bT	938	2	3	1.10	33	63	60	0.031	24	76	0.007	1.0
CS-D08	2	bT	999	3	9	1.17	28	64	68	0.033	28	69	0.010	1.3
CS-D09	0	bT	892	<1	<1	0.93	30	65	60	0.031	22	70	0.012	0.9
CS-D11	0	bT	757	<1	<1	1.40	35	65	60	0.057	23	83	0.008	1.1
CS-D12	0	bT	1145	1	<1	1.16	31	66	72	0.068	30	86	0.008	1.0
CS-D13	0	bT	420	2	4	0.13	46	61	70	0.022	34	120	0.011	2.3
CS-D14	0	bT	855	<1	<1	0.96	30	60	70	0.031	28	101	0.010	1.3
CS-D15	0	bT	7797	<1	3	0.79	24	73	72	0.183	44	150	0.026	1.4
CS-E02	0	bT	759	<1	<1	1.42	26	43	50	0.055	22	50	0.012	1.1
CS-E03	0	bT	560	<1	1	1.04	23	65	70	0.050	25	50	0.017	1.3

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Mn @ ppm	Mo @ ppm	Mo # ppm	Na # %	Nd # ppm	Ni @ ppm	Ni # ppm	P @ %	Pb @ ppm	Rb # ppm	S @ ppm	Sb # ppm
CS-E04	0	bT	1188	<1	3	1.13	30	52	71	0.038	33	84	0.009	1.1
CS-E05	0	bT	898	<1	<1	1.13	27	60	60	0.034	28	74	0.014	1.0
CS-E06	0	dT	1694	<1	<1	0.83	31	59	81	0.066	35	61	0.009	1.2
CS-E07	0	bT	436	<1	2	0.94	30	68	70	0.024	27	94	0.009	0.8
CS-E08	0	bT	371	<1	4	1.11	26	48	50	0.087	23	68	0.021	0.8
CS-E09	0	bT	1128	<1	5	0.80	29	54	60	0.090	24	78	0.020	1.4
CS-E10	0	bT	869	<1	<1	1.01	26	63	70	0.037	15	115	0.008	1.1
CS-E11	1	bT	1118	<2	5	1.05	53	63	<30	0.064	16	98	<0.01	1.5
CS-E11	2	bT	1048	<2	<1	1.02	44	62	<24	0.071	17	90	0.01	1.5
CS-E12	0	bT	1073	<2	2	0.89	41	64	<27	0.059	16	95	0.01	1.4
CS-E13	0	bT	1052	<2	<1	1.17	44	62	70	0.047	16	91	0.01	1.3
CS-E14	0	dT	307	<2	<1	1.12	54	66	<28	0.031	13	110	0.01	0.4
CS-E15	0	bT	796	<2	<1	1.10	45	60	<27	0.050	12	93	<0.01	1.5
CS-F02	0	bT	588	<1	<1	1.11	37	56	65	0.045	28	95	0.007	1.2
CS-F03	0	bT	857	1	<1	1.24	27	53	95	0.042	27	69	0.012	0.9
CS-F04a	0	aT	996	<1	2	0.94	38	57	70	0.073	35	70	0.023	2.3
CS-F04b	0	bT	1577	1	<1	0.93	29	65	66	0.027	22	100	0.007	1.8
CS-F05	0	bT	1423	<1	2	1.06	31	59	90	0.022	26	85	0.007	1.5
CS-F06	0	bT	1045	1	2	0.92	23	52	70	0.049	33	90	0.019	1.7
CS-F07	0	bT	1278	<1	3	0.43	24	91	119	0.020	27	165	0.009	0.6
CS-F08	0	bT	1342	<1	<1	0.87	31	55	60	0.032	35	93	0.008	1.0
CS-F09	0	bT	1692	<1	4	0.57	42	63	65	0.057	35	117	0.008	2.8
CS-F10	0	bT	3243	<1	4	0.14	31	66	93	0.072	42	96	0.010	5.3
CS-F11	0	bT	1417	<2	<1	0.97	34	53	78	0.045	19	63	<0.01	1.8
CS-F12	0	bT	467	<2	<1	0.75	44	60	<28	0.059	17	111	0.01	2.4
CS-F13	0	bT	432	<2	<1	0.38	41	50	<29	0.063	20	198	0.01	1.6
CS-F14	0	bT	886	<2	<1	1.03	53	61	52	0.053	15	96	0.01	1.2
CS-F15	0	dT	622	<2	<1	1.12	33	47	60	0.044	12	65	0.01	0.9
CS-F15	8	dT	649	<2	<1	1.08	28	50	<20	0.045	14	53	0.01	0.9
CS-G02a	0	aT	1105	1	<1	1.16	36	58	57	0.071	34	81	0.018	1.1
CS-G02b	0	bT	476	<1	<1	1.39	22	37	58	0.042	22	60	0.007	0.7
CS-G02b	8	bT	524	<1	<1	1.32	25	43	54	0.047	34	49	0.008	0.8
CS-G03	0	bT	860	<1	<1	0.97	24	52	52	0.031	31	84	0.007	1.2
CS-G04	0	bT	981	<1	2	1.14	25	47	45	0.031	30	78	0.012	1.5
CS-G05	0	bT	320	<1	3	1.39	21	43	49	0.045	20	50	0.011	1.0
CS-G06	0	bT	230	<1	<1	0.89	18	32	<28	0.098	24	59	0.020	0.9
CS-G07	0	bT	3774	<1	<1	0.61	27	64	68	0.137	35	89	0.023	4.0
CS-G08	0	bT	1326	<1	5	0.48	20	50	55	0.097	33	100	0.019	2.4
CS-G09	0	bT	2324	<1	<1	0.39	26	67	83	0.080	32	100	0.008	3.1
CS-G10	0	bT	2660	<1	<1	0.07	40	65	80	0.045	39	142	0.006	0.8
CS-G11	0	bT	426	<2	4	0.56	37	48	<23	0.043	10	104	0.01	1.1
CS-G12	0	bT	915	<2	6	0.22	35	52	<26	0.088	21	187	<0.01	8.8
CS-G13	0	bT	335	<2	<1	0.08	39	26	<22	0.093	27	263	<0.01	2.2
CS-G13	8	bT	381	<1	<1	0.09	27	25	<25	0.104	44	200	0.008	2.1
CS-G14	0	bT	662	<2	<1	0.81	39	43	<21	0.036	14	108	<0.01	1.9
CS-G14	8	bT	692	<1	<1	0.86	20	45	50	0.038	31	75	0.008	1.8

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Mn @ ppm	Mo @ ppm	Mo # ppm	Na # %	Nd # ppm	Ni @ ppm	Ni # ppm	P @ %	Pb @ ppm	Rb # ppm	S @ ppm	Sb # ppm
CS-G15	0	bT	847	<2	4	1.14	56	57	65	0.062	14	83	0.01	1.3
CS-GH14	0	rk	698	2	3	0.74	16	35	40	0.038	18	76	0.005	4.5
CS-H02	0	bT	409	<1	2	0.85	20	53	65	0.046	36	99	0.015	1.0
CS-H03	0	bT	745	<1	<1	1.06	22	55	50	0.040	37	90	0.008	1.4
CS-H04	0	bT	563	1	<1	1.18	23	46	50	0.044	23	70	0.010	2.1
CS-H05	0	bT	925	<1	<1	0.87	23	55	50	0.031	26	74	0.007	2.2
CS-H06	0	bT	856	<1	3	0.92	29	60	62	0.062	31	87	0.008	2.2
CS-H12	0	bT	72	<2	<1	0.08	45	48	<25	0.028	28	151	0.01	1.0
CS-H13	0	bT	932	<2	<1	0.12	68	52	<25	0.030	21	140	<0.01	5.0
CS-H13	8	bT	787	<1	<1	0.13	33	48	50	0.028	26	118	0.005	4.5
CS-H14	0	bT?	923	<2	3	0.20	31	40	<20	0.019	18	203	0.01	2.5
CS-H14	8	bT?	823	<1	<1	0.21	20	38	36	0.022	28	180	0.007	2.3
CS-H15	0	bT	903	<2	2	0.66	57	46	<23	0.049	22	130	0.01	2.3
CS-H15	8	bT	783	<1	<1	0.73	33	45	51	0.043	35	116	0.009	2.1
CS-K02	0	bT	871	1	<1	1.02	22	66	90	0.037	125	88	0.009	2.1
CS-K03	0	bT	826	<1	<1	0.81	20	55	60	0.113	76	110	0.027	1.9
CS-K04	0	bT	694	<1	<1	1.10	26	55	67	0.041	65	89	0.011	1.5
CS-K05	1	bT	749	<1	<1	0.95	25	56	59	0.042	83	86	0.010	1.9
CS-K05	2	bT	895	<1	3	1.06	42	55	60	0.050	80	93	0.014	2.5
CS-K09-1	0	Cv	483	<1	<1	1.05	19	44	53	0.040	31	78	0.014	2.5
CS-K09-2	0	GF	756	2	<1	0.93	22	54	58	0.073	32	83	0.023	3.5
CS-K09-3	0	bT	769	<1	<1	1.25	24	40	50	0.065	33	86	0.009	1.9
CS-K11	0	bT	487	<1	<1	0.28	31	58	57	0.022	26	77	0.010	2.3
CS-K12	0	bT	349	<1	<1	1.18	24	41	53	0.026	22	61	0.009	0.6
CS-K13	0	bT	65	<2	<1	0.07	40	97	<20	0.008	21	75	<0.01	0.9
CS-K14	0	bT	810	<2	<1	0.23	25	46	60	0.013	23	174	<0.01	2.1
CS-L02	0	bT	572	1	<1	1.17	24	52	57	0.038	34	84	0.012	1.3
CS-L02	8	bT	507	2	<1	1.12	23	47	47	0.036	33	84	0.009	1.1
CS-L05	0	bT	708	<1	<1	1.17	30	48	60	0.045	29	54	0.012	2.2
CS-L06	0	bT	481	2	<1	1.25	25	44	50	0.057	21	51	0.016	1.2
CS-L11	0	bT	447	2	<1	0.10	35	51	65	0.018	42	96	0.013	1.2
CS-L12a	0	bT	379	<1	<1	0.66	27	52	60	0.041	24	65	0.020	1.1
CS-L12b	0	bT	317	<1	2	0.25	26	33	50	0.021	26	78	0.007	1.5
CS-L13	0	bT	326	<2	2	0.49	31	71	<20	0.033	17	79	0.01	1.2
CS-L14	0	bT	687	<2	3	0.10	45	33	<22	0.014	30	196	<0.01	2.1
CS-L14	8	bT	662	<1	2	0.10	30	32	40	0.018	33	150	0.004	1.7

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Sc # ppm	Se $ ppm	Sm # ppm	Sn $@ ppm	Sr @ ppm	Ta # ppm	Tb # ppm	Te $ ppm	Th # ppm	Ti @ %	Tl $ ppm	U # ppm
CS-A11	0	bT	15.9	0.5	6.9	<1	111	<0.5	0.9	<0.1	8.9	0.63	0.5	2.1
CS-A12	0	bT	16.6	0.2	7.1	1	109	<0.5	<0.5	<0.1	9.2	0.59	0.5	2.4
CS-A13-1	0	bT	12.5	0.2	5.1	1	77	1.7	0.6	0.1	9.4	0.62	0.6	2.5
CS-A13-2	0	dT	11.1	<0.1	4.9	1	77	<0.5	<0.5	0.1	9.7	0.62	0.6	2.0
CS-A13-2	8	dT	11.7	0.5	5.0	1	64	<0.5	0.7	<0.1	10.3	0.46	0.6	2.6
CS-A14-1	0	bT	12.5	0.3	6.6	<1	84	<0.5	0.7	<0.1	9.0	0.33	0.4	2.3
CS-A14-2	0	bT	26.1	0.3	13.2	2	78	<0.5	1.2	<0.1	18.4	0.86	1.0	3.3
CS-B03	0	bT	13.1	0.7	5.2	<1	73	1.9	<0.5	0.1	8.9	0.70	0.5	1.8
CS-B10-1	1	bT	14.7	0.2	6.2	1	124	<0.5	0.8	0.1	8.9	0.56	0.5	2.0
CS-B10-2	2	bT	15.4	0.5	6.3	<1	123	<0.5	<0.5	0.1	9.0	0.56	0.5	2.1
CS-B11	0	bT	10.3	0.4	4.8	<1	85	<0.5	<0.5	0.1	7.7	0.61	0.4	2.0
CS-B12	0	bT	17.9	<0.1	6.7	1	127	<0.5	1.0	<0.1	9.2	0.62	0.6	2.4
CS-B13	0	bT	13.8	<0.1	5.6	1	115	<0.5	0.9	0.2	8.7	0.68	0.5	2.1
CS-B14	0	bT	13.0	0.3	5.1	<1	93	<0.5	<0.5	<0.1	8.8	0.71	0.5	2.2
CS-B15	0	bT	17.3	0.5	7.1	2	82	<0.5	0.9	<0.1	9.5	0.64	0.5	2.2
CS-C03	0	bT	14.9	0.6	4.6	1	71	<0.5	0.7	<0.1	9.6	0.63	0.5	2.5
CS-C04	0	bT	15.4	0.5	6.9	<1	108	<0.5	1.2	0.1	9.9	0.74	0.5	2.1
CS-C04	8	bT	14.9	0.9	6.7	<1	108	<0.5	0.9	0.1	9.8	0.73	0.4	2.1
CS-C05a-1	0	dT	13.1	0.3	4.5	<1	85	<0.5	<0.5	0.2	9.7	0.65	0.7	2.2
CS-C05a-2	0	rk	19.3	0.5	7.2	1	83	<0.5	<0.5	0.1	12.8	0.63	0.8	2.4
CS-C05b	0	bT	15.1	0.5	7.3	1	108	1.5	<0.5	<0.1	9.9	0.65	0.5	1.6
CS-C06	0	bT	15.8	0.3	6.5	<1	76	<0.5	0.9	0.1	9.3	0.66	0.5	1.7
CS-C07	0	bT	12.1	0.5	5.6	<1	91	1.1	<0.5	0.1	8.1	0.67	0.5	1.5
CS-C08a	0	aT	20.2	1.3	7.8	1	86	1.6	1.3	0.1	11.7	0.82	0.6	2.2
CS-C08b	0	bT	13.0	0.4	5.7	<1	77	1.7	0.7	0.1	9.1	0.65	0.5	2.1
CS-C09	0	bT	16.4	0.6	7.9	<1	83	<0.5	1.1	0.1	9.4	0.60	0.5	3.0
CS-C10	0	bT	14.8	0.3	7.3	1	94	<0.5	<0.5	0.1	9.3	0.66	0.5	1.8
CS-C11	0	bT	13.7	0.3	5.7	<1	82	<0.5	0.8	0.1	9.0	0.68	0.5	1.7
CS-C12	0	bT	14.0	<0.1	6.1	<1	90	<0.5	0.9	<0.1	9.4	0.74	0.5	2.3
CS-C13	0	bT	14.9	0.9	4.9	2	63	<0.5	0.6	0.1	9.4	0.66	0.6	3.3
CS-C14	0	bT	15.5	0.3	6.9	<1	95	1.3	1.1	<0.1	8.8	0.61	0.5	1.8
CS-C15	0	bT	16.6	0.4	7.5	1	119	1.8	0.9	<0.1	9.6	0.65	0.6	2.2
CS-D04	0	bT	15.4	0.2	7.6	<1	62	<0.5	1.0	0.1	11.0	0.63	0.6	1.6
CS-D05	0	bT	11.4	0.2	5.4	<1	64	1.0	0.9	<0.1	9.4	0.56	0.5	2.2
CS-D06	0	bT	17.5	<0.1	7.2	1	68	<0.5	<0.5	0.1	10.2	0.39	0.8	2.4
CS-D07	0	dT	10.5	0.5	5.2	1	67	1.4	<0.5	<0.1	8.4	0.58	0.6	1.9
CS-D08	1	bT	14.2	0.5	6.2	<1	70	0.8	0.7	<0.1	8.9	0.58	0.5	2.4
CS-D08	2	bT	15.5	0.5	7.1	<1	73	<0.5	<0.5	<0.1	9.6	0.37	0.5	2.2
CS-D09	0	bT	12.5	0.6	5.9	1	72	<0.5	<0.5	0.1	9.6	0.62	0.5	1.7
CS-D11	0	bT	17.2	0.2	7.5	<1	81	1.6	0.9	0.1	9.2	0.54	0.5	2.4
CS-D12	0	bT	17.3	0.5	7.3	1	97	<0.5	<0.5	<0.1	10.2	0.61	0.6	2.2
CS-D13	0	bT	20.1	0.6	9.8	<1	83	1.0	1.7	0.1	13.4	0.63	0.8	3.7
CS-D14	0	bT	15.4	0.2	4.6	<1	60	<0.5	<0.5	0.1	9.4	0.58	0.5	1.4
CS-D15	0	bT	22.5	0.7	6.9	2	44	1.1	1.1	<0.1	13.0	0.55	0.8	4.7
CS-E02	0	bT	10.7	0.5	5.5	<1	102	0.8	0.8	0.1	8.9	0.61	0.4	1.9
CS-E03	0	bT	10.8	0.6	4.9	<1	56	<0.5	<0.5	0.1	8.3	0.44	0.4	1.7

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Sc # ppm	Se $ ppm	Sm # ppm	Sn $@ ppm	Sr @ ppm	Ta # ppm	Tb # ppm	Te $ ppm	Th # ppm	Ti @ %	Tl $ ppm	U # ppm
CS-E04	0	bT	13.8	0.4	5.7	<1	57	<0.5	0.9	<0.1	9.6	0.61	0.5	2.6
CS-E05	0	bT	12.9	0.4	5.2	<1	54	1.2	0.7	<0.1	9.6	0.44	0.4	2.2
CS-E06	0	dT	15.6	0.6	7.3	1	61	<0.5	1.2	<0.1	9.7	0.55	0.4	3.1
CS-E07	0	bT	15.7	0.3	5.1	<1	54	<0.5	0.6	<0.1	9.5	0.62	0.6	2.2
CS-E08	0	bT	10.9	0.5	5.5	<1	65	1.2	0.9	0.1	9.4	0.55	0.5	1.8
CS-E09	0	bT	12.4	0.7	6.0	1	56	1.3	1.0	0.1	10.1	0.64	0.6	2.7
CS-E10	0	bT	12.8	0.3	5.4	1	57	<0.5	<0.5	<0.1	9.1	0.60	0.5	2.2
CS-E11	1	bT	16.3		8.7	1	65	1.1	0.9		10.4	0.44		2.8
CS-E11	2	bT	14.7		7.4	<1	65	1.0	0.8		9.5	0.44		3.5
CS-E12	0	bT	16.4		6.9	<1	67	<0.5	0.9		9.0	0.43		2.1
CS-E13	0	bT	19.3		7.2	<1	71	<0.5	1.1		11.3	0.40		2.4
CS-E14	0	dT	17.4		7.2	<1	55	<0.5	<0.5		11.6	0.43		2.7
CS-E15	0	bT	18.5		7.8	<1	69	<0.5	1.2		10.7	0.42		2.5
CS-F02	0	bT	15.1	0.4	6.7	1	82	<0.5	0.9	0.1	9.5	0.60	0.7	2.0
CS-F03	0	bT	11.3	0.3	5.5	<1	79	<0.5	0.8	0.1	9.0	0.60	0.5	1.7
CS-F04a	0	aT	11.7	0.6	6.8	6	50	<0.5	1.1	<0.1	10.8	0.59	0.6	2.7
CS-F04b	0	bT	15.5	0.4	6.5	<1	50	<0.5	1.1	0.1	9.6	0.45	0.6	2.2
CS-F05	0	bT	14.3	0.6	6.3	<1	53	<0.5	0.9	<0.1	9.7	0.55	0.6	2.1
CS-F06	0	bT	11.2	0.9	4.5	2	64	0.8	0.7	0.2	9.1	0.63	0.5	2.1
CS-F07	0	bT	18.4	<0.1	4.0	1	46	1.1	0.8	0.1	10.2	0.52	0.6	2.2
CS-F08	0	bT	14.9	0.6	6.0	<1	59	<0.5	0.8	<0.1	9.7	0.65	0.5	2.3
CS-F09	0	bT	18.3	0.6	7.7	1	63	1.4	1.3	0.1	9.9	0.57	0.6	3.0
CS-F10	0	bT	22.2	0.5	8.1	1	28	0.8	<0.5	0.1	11.4	0.64	0.4	1.9
CS-F11	0	bT	16.0		5.5	2	63	1.4	0.7		11.3	0.52		2.7
CS-F12	0	bT	20.7		8.0	2	64	1.0	<0.5		13.4	0.48		3.3
CS-F13	0	bT	16.9		4.9	3	49	<0.5	1.0		11.9	0.51		2.1
CS-F14	0	bT	17.1		6.6	1	71	<0.5	<0.5		10.8	0.44		2.3
CS-F15	0	dT	11.5		4.9	<1	65	<0.5	<0.5		9.7	0.44		2.3
CS-F15	8	dT	11.1		4.7	1	67	1.3	0.9		8.7	0.47		2.2
CS-G02a	0	aT	15.7	0.6	8.9	3	56	<0.5	0.9	<0.1	14.7	0.62	0.6	4.6
CS-G02b	0	bT	9.4	0.3	5.2	<1	67	<0.5	<0.5	<0.1	8.2	0.45	0.4	1.9
CS-G02b	8	bT	8.9	0.4	5.1	<1	77	<0.5	0.8	<0.1	8.5	0.51	0.4	2.2
CS-G03	0	bT	12.4	0.3	5.3	1	51	<0.5	0.7	0.1	9.7	0.51	0.6	2.0
CS-G04	0	bT	12.9	0.4	6.5	<1	60	<0.5	<0.5	0.1	9.7	0.58	0.6	1.7
CS-G05	0	bT	9.9	0.4	5.6	1	75	<0.5	0.6	0.1	9.0	0.57	0.4	2.0
CS-G06	0	bT	9.6	0.4	4.4	<1	56	1.2	<0.5	0.1	7.3	0.53	0.4	2.4
CS-G07	0	bT	21.8	0.4	6.6	2	33	1.3	<0.5	0.1	14.0	0.56	0.4	3.0
CS-G08	0	bT	21.8	<0.1	5.1	2	38	<0.5	<0.5	0.1	9.7	0.73	0.5	2.8
CS-G09	0	bT	23.9	0.5	9.2	3	46	<0.5	1.3	0.1	10.6	0.72	0.5	3.1
CS-G10	0	bT	23.0	0.8	10.5	2	90	<0.5	1.4	<0.1	12.7	0.60	0.7	1.7
CS-G11	0	bT	15.6		4.9	2	37	0.8	<0.5		9.6	0.47		2.3
CS-G12	0	bT	22.5		6.0	<1	49	1.2	<0.5		16.5	0.50		2.3
CS-G13	0	bT	17.6		5.3	2	17	2.0	<0.5		18.0	0.48		3.4
CS-G13	8	bT	16.0	<0.1	5.2	2	28	1.4	<0.5	<0.1	16.4	0.56	1.3	3.1
CS-G14	0	bT	14.5		5.3	<1	57	1.1	<0.5		12.0	0.51		2.1
CS-G14	8	bT	13.6	0.3	5.6	1	63	1.0	<0.5	<0.1	10.7	0.74	0.6	2.4

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	Sc # ppm	Se $ ppm	Sm # ppm	Sn $@ ppm	Sr @ ppm	Ta # ppm	Tb # ppm	Te $ ppm	Th # ppm	Ti @ %	Tl $ ppm	U # ppm
CS-G15	0	bT	17.9		7.6	<1	76	1.2	1.0		11.1	0.41		2.3
CS-GH14	0	rk	10.5	0.4	3.8	<1	44	<0.5	<0.5	<0.1	8.7	0.36	0.5	2.1
CS-H02	0	bT	12.7	0.3	5.0	2	51	1.5	<0.5	<0.1	8.7	0.60	0.8	2.3
CS-H03	0	bT	13.1	0.3	5.5	1	58	<0.5	<0.5	<0.1	9.7	0.54	0.7	2.9
CS-H04	0	bT	10.1	0.7	5.3	<1	67	<0.5	<0.5	0.1	8.7	0.60	0.5	2.4
CS-H05	0	bT	13.3	0.1	5.1	<1	48	1.4	0.6	<0.1	10.0	0.64	0.5	2.7
CS-H06	0	bT	16.4	0.2	7.5	1	54	<0.5	0.9	0.1	10.6	0.62	0.7	2.1
CS-H12	0	bT	17.1		6.2	2	37	1.1	0.8		13.0	0.37		3.3
CS-H13	0	bT	20.0		10.3	2	34	1.9	1.8		14.6	0.53		3.0
CS-H13	8	bT	18.1	0.6	10.5	2	31	<0.5	1.2	<0.1	13.0	0.58	1.0	2.0
CS-H14	0	bT?	18.1		4.8	1	28	1.0	<0.5		13.2	0.41		2.1
CS-H14	8	bT?	16.7	0.5	4.8	2	27	1.4	0.7	0.1	13.1	0.46	1.3	2.8
CS-H15	0	bT	15.8		8.6	2	63	0.9	1.3		15.2	0.49		3.4
CS-H15	8	bT	15.3	0.6	9.1	2	59	1.6	1.1	<0.1	14.8	0.58	0.7	3.1
CS-K02	0	bT	16.9	0.2	5.9	3	57	1.2	0.5	<0.1	11.0	0.61	1.2	1.9
CS-K03	0	bT	16.1	0.6	6.2	2	52	0.7	1.0	<0.1	10.5	0.59	1.0	2.6
CS-K04	0	bT	12.6	0.3	5.5	1	61	<0.5	<0.5	<0.1	9.6	0.46	0.8	2.3
CS-K05	1	bT	13.9	<0.1	5.6	2	59	1.6	0.8	<0.1	10.7	0.59	0.9	3.1
CS-K05	2	bT	15.2	0.4	7.3	2	90	<0.5	<0.5	<0.1	10.4	0.84	0.9	2.0
CS-K09-1	0	Cv	11.5	0.5	5.0	1	65	1.4	0.8	<0.1	10.0	0.56	0.5	2.7
CS-K09-2	0	GF	13.3	0.9	5.7	2	59	1.3	1.0	0.1	13.1	0.52	0.6	2.7
CS-K09-3	0	bT	11.3	0.4	5.8	2	76	1.9	1.0	0.1	13.9	0.62	0.7	3.5
CS-K11	0	bT	14.4	0.6	5.9	2	34	0.8	1.0	<0.1	13.7	0.66	0.7	4.0
CS-K12	0	bT	10.2	0.8	5.9	<1	59	1.0	0.8	0.1	10.6	0.43	0.4	2.5
CS-K13	0	bT	19.3		5.9	2	34	1.1	0.9		11.7	0.46		3.3
CS-K14	0	bT	16.5		3.7	1	29	1.5	<0.5		12.6	0.42		3.4
CS-L02	0	bT	12.4	0.1	5.6	1	68	1.2	0.8	<0.1	9.3	0.59	0.6	3.1
CS-L02	8	bT	11.2	0.3	5.3	1	62	1.5	<0.5	<0.1	10.0	0.57	0.6	2.4
CS-L05	0	bT	11.9	0.1	5.7	1	68	<0.5	0.7	<0.1	10.1	0.53	0.5	2.4
CS-L06	0	bT	10.6	0.5	5.9	2	74	1.4	0.9	<0.1	10.0	0.59	0.5	2.1
CS-L11	0	bT	15.4	0.2	6.6	2	18	1.0	1.0	<0.1	14.7	0.69	0.6	3.7
CS-L12a	0	bT	11.3	0.7	5.4	1	50	0.8	1.1	<0.1	10.8	0.47	0.5	2.9
CS-L12b	0	bT	16.7	0.4	4.9	2	37	1.4	0.9	<0.1	11.0	0.57	0.6	3.0
CS-L13	0	bT	13.4		5.9	2	48	1.6	0.7		12.6	0.41		2.5
CS-L14	0	bT	14.3		5.7	3	26	1.6	0.9		14.8	0.40		3.0
CS-L14	8	bT	14.1	<0.1	5.7	3	27	1.6	0.9	<0.1	13.9	0.47	1.1	2.0

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	V @ ppm	W # ppm	Y @ ppm	Yb # ppm	Zn @ ppm	Zn # ppm	Mass g
CS-A11	0	bT	112	<1	61	3.8	110	110	22.06
CS-A12	0	bT	112	<1	66	4.0	113	111	19.13
CS-A13-1	0	bT	101	<1	22	2.4	126	140	18.63
CS-A13-2	0	dT	94	<1	14	2.6	90	86	21.32
CS-A13-2	8	dT	83	<1	11	2.3	67	105	21.49
CS-A14-1	0	bT	78	<1	21	3.3	89	108	20.73
CS-A14-2	0	bT	151	<1	80	6.1	147	223	12.07
CS-B03	0	bT	97	<1	31	2.8	103	<50	23.44
CS-B10-1	1	bT	99	<1	22	3.5	103	113	20.43
CS-B10-2	2	bT	96	<1	22	3.3	98	171	19.82
CS-B11	0	bT	79	<1	30	2.7	102	129	25.89
CS-B12	0	bT	108	<1	47	3.5	105	118	18.69
CS-B13	0	bT	96	<1	39	3.0	93	64	22.62
CS-B14	0	bT	100	<1	24	2.7	89	73	19.00
CS-B15	0	bT	107	<1	34	3.7	83	<50	20.17
CS-C03	0	bT	93	<1	23	2.6	89	137	20.82
CS-C04	0	bT	102	<1	44	3.6	87	<50	19.11
CS-C04	8	bT	101	<1	34	3.3	89	62	18.78
CS-C05a-1	0	dT	107	<1	27	2.4	90	<50	17.89
CS-C05a-2	0	rk	114	<1	46	3.5	102	117	15.97
CS-C05b	0	bT	94	<1	48	3.6	85	84	20.43
CS-C06	0	bT	98	<1	35	3.4	77	<50	19.23
CS-C07	0	bT	83	<1	38	3.1	69	<50	27.42
CS-C08a	0	aT	103	<1	46	3.6	83	118	18.40
CS-C08b	0	bT	89	<1	25	2.9	75	97	20.11
CS-C09	0	bT	89	<1	38	4.0	96	71	23.16
CS-C10	0	bT	93	2	31	3.7	73	101	20.68
CS-C11	0	bT	102	<1	34	2.8	75	126	21.21
CS-C12	0	bT	98	<1	23	3.2	79	87	17.94
CS-C13	0	bT	117	<1	20	2.8	89	76	19.50
CS-C14	0	bT	100	<1	49	3.7	80	92	23.85
CS-C15	0	bT	104	<1	47	3.9	76	102	18.24
CS-D04	0	bT	94	<1	23	3.4	71	70	19.71
CS-D05	0	bT	80	<1	19	3.5	67	97	28.51
CS-D06	0	bT	99	<1	21	4.0	76	105	20.33
CS-D07	0	dT	87	<1	12	3.4	57	81	23.24
CS-D08	1	bT	90	<1	18	3.3	67	88	20.59
CS-D08	2	bT	94	<1	19	3.7	91	109	20.10
CS-D09	0	bT	86	<1	15	3.1	70	84	19.98
CS-D11	0	bT	99	2	29	4.0	77	114	21.14
CS-D12	0	bT	109	<1	51	3.7	84	81	17.72
CS-D13	0	bT	121	<1	33	4.9	62	81	19.97
CS-D14	0	bT	100	<1	13	2.8	72	<50	19.19
CS-D15	0	bT	137	2	19	4.5	126	118	17.67
CS-E02	0	bT	76	<1	20	3.2	59	<50	32.31
CS-E03	0	bT	71	<1	11	2.6	69	<50	27.92

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	V @ ppm	W # ppm	Y @ ppm	Yb # ppm	Zn @ ppm	Zn # ppm	Mass g
CS-E04	0	bT	84	<1	14	3.4	68	57	19.79
CS-E05	0	bT	79	<1	9	2.9	72	106	20.21
CS-E06	0	dT	85	<1	26	3.5	81	<50	18.49
CS-E07	0	bT	106	<1	19	3.2	77	<50	17.61
CS-E08	0	bT	76	2	15	3.5	70	88	23.73
CS-E09	0	bT	101	<1	20	3.2	68	56	22.49
CS-E10	0	bT	89	<1	13	3.1	63	<50	18.86
CS-E11	1	bT	106	<1	31	4.3	71	91	23.57
CS-E11	2	bT	104	<1	26	3.9	75	83	23.54
CS-E12	0	bT	114	<1	29	3.7	67	102	27.16
CS-E13	0	bT	106	<1	25	3.7	67	119	21.90
CS-E14	0	dT	91	<1	22	3.8	69	84	21.40
CS-E15	0	bT	106	<1	30	4.0	65	88	24.27
CS-F02	0	bT	95	<1	19	3.5	75	108	19.47
CS-F03	0	bT	76	2	14	3.0	61	72	26.59
CS-F04a	0	aT	83	<1	15	3.8	68	55	22.27
CS-F04b	0	bT	87	<1	17	3.4	73	115	20.77
CS-F05	0	bT	78	<1	11	3.2	63	61	20.44
CS-F06	0	bT	86	<1	22	2.8	71	90	24.85
CS-F07	0	bT	112	<1	18	2.5	87	104	15.83
CS-F08	0	bT	93	4	17	3.5	75	79	17.40
CS-F09	0	bT	129	<1	24	4.2	89	86	17.90
CS-F10	0	bT	93	3	26	4.1	99	157	23.30
CS-F11	0	bT	105	<1	18	3.2	66	75	22.56
CS-F12	0	bT	123	5	34	4.8	73	99	22.64
CS-F13	0	bT	116	5	11	2.3	83	107	19.43
CS-F14	0	bT	107	<1	20	3.4	64	112	21.88
CS-F15	0	dT	87	<1	13	2.6	58	74	26.75
CS-F15	8	dT	89	<1	13	2.6	63	68	26.95
CS-G02a	0	aT	78	<1	14	5.0	68	93	22.46
CS-G02b	0	bT	54	<1	10	3.3	53	76	32.99
CS-G02b	8	bT	61	<1	13	3.0	58	<50	29.35
CS-G03	0	bT	73	<1	11	2.9	69	91	22.85
CS-G04	0	bT	74	<1	27	3.3	63	<50	21.71
CS-G05	0	bT	64	2	16	3.3	58	65	32.05
CS-G06	0	bT	69	<1	13	2.9	53	64	25.96
CS-G07	0	bT	105	2	10	3.4	82	111	20.17
CS-G08	0	bT	123	<1	19	3.7	97	138	21.83
CS-G09	0	bT	136	3	46	4.9	96	138	17.15
CS-G10	0	bT	129	3	16	4.5	82	133	14.58
CS-G11	0	bT	110	<1	14	3.2	58	100	25.14
CS-G12	0	bT	117	5	19	4.6	78	97	23.60
CS-G13	0	bT	74	7	7	4.0	51	57	25.13
CS-G13	8	bT	67	7	37	3.4	66	87	23.45
CS-G14	0	bT	95	<1	18	3.4	55	58	25.80
CS-G14	8	bT	88	4	36	3.2	70	79	21.23

Appendix 2. Analytical Data, Coldstream (NTS 21 J/06)

SAMPLE	Rep. Stat.	Mat-erial	V @ ppm	W # ppm	Y @ ppm	Yb # ppm	Zn @ ppm	Zn # ppm	Mass g
CS-G15	0	bT	106	<1	31	4.0	71	65	22.22
CS-GH14	0	rk	109	<1	24	2.7	73	67	27.99
CS-H02	0	bT	93	<1	12	2.7	101	95	19.43
CS-H03	0	bT	78	<1	10	3.2	80	83	22.67
CS-H04	0	bT	73	<1	12	2.9	58	117	32.13
CS-H05	0	bT	89	3	19	3.1	73	100	23.08
CS-H06	0	bT	109	<1	42	4.0	81	89	20.14
CS-H12	0	bT	118	<1	18	4.0	70	78	18.50
CS-H13	0	bT	112	5	52	6.3	71	107	22.61
CS-H13	8	bT	91	<1	51	5.4	72	124	23.06
CS-H14	0	bT?	76	5	31	3.8	67	92	23.89
CS-H14	8	bT?	67	4	34	3.6	67	81	23.04
CS-H15	0	bT	103	6	40	5.6	69	69	24.16
CS-H15	8	bT	90	4	36	5.1	68	78	21.49
CS-K02	0	bT	100	<1	10	3.4	180	203	19.28
CS-K03	0	bT	107	<1	15	3.9	143	214	20.49
CS-K04	0	bT	76	<1	9	3.3	113	129	23.50
CS-K05	1	bT	85	<1	12	3.3	127	122	20.36
CS-K05	2	bT	109	<1	46	3.8	155	139	22.47
CS-K09-1	0	Cv	72	<1	13	3.4	59	65	30.05
CS-K09-2	0	GF	75	5	13	3.7	66	57	22.16
CS-K09-3	0	bT	72	3	23	4.1	53	<50	27.21
CS-K11	0	bT	91	7	18	4.4	72	93	19.75
CS-K12	0	bT	68	<1	10	3.8	53	60	30.99
CS-K13	0	bT	130	<1	31	4.5	55	69	24.59
CS-K14	0	bT	77	5	23	3.5	74	88	25.14
CS-L02	0	bT	78	<1	9	3.2	79	100	23.39
CS-L02	8	bT	73	2	9	3.0	80	116	25.89
CS-L05	0	bT	74	<1	13	3.7	72	83	24.60
CS-L06	0	bT	73	2	17	4.0	76	83	30.67
CS-L11	0	bT	95	5	27	6.0	61	80	22.62
CS-L12a	0	bT	82	<1	12	3.9	69	66	22.17
CS-L12b	0	bT	101	<1	15	4.0	34	65	20.08
CS-L13	0	bT	95	<1	17	3.9	83	103	24.86
CS-L14	0	bT	71	8	24	4.4	65	97	22.98
CS-L14	8	bT	62	8	33	4.4	65	98	20.62